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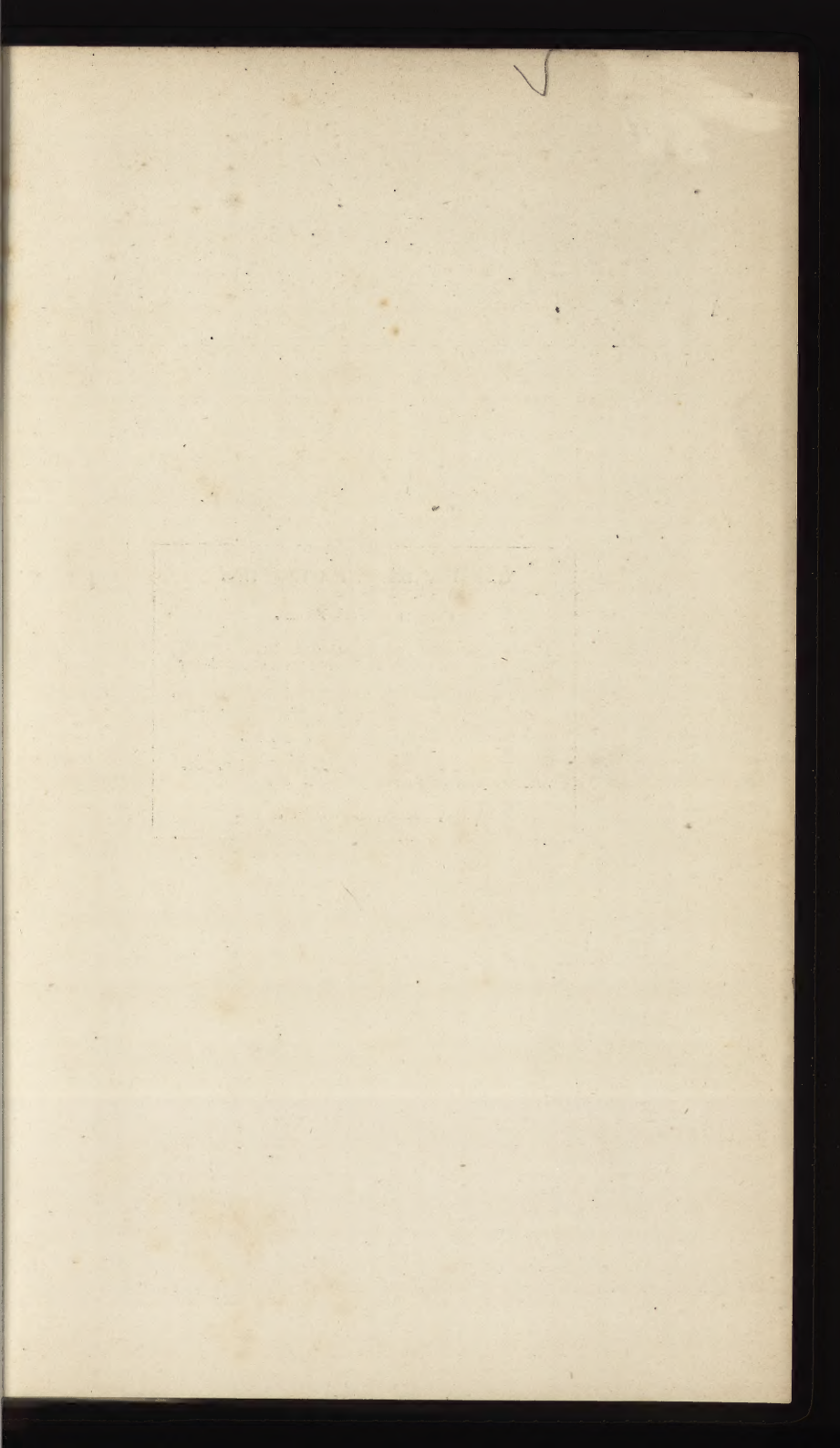
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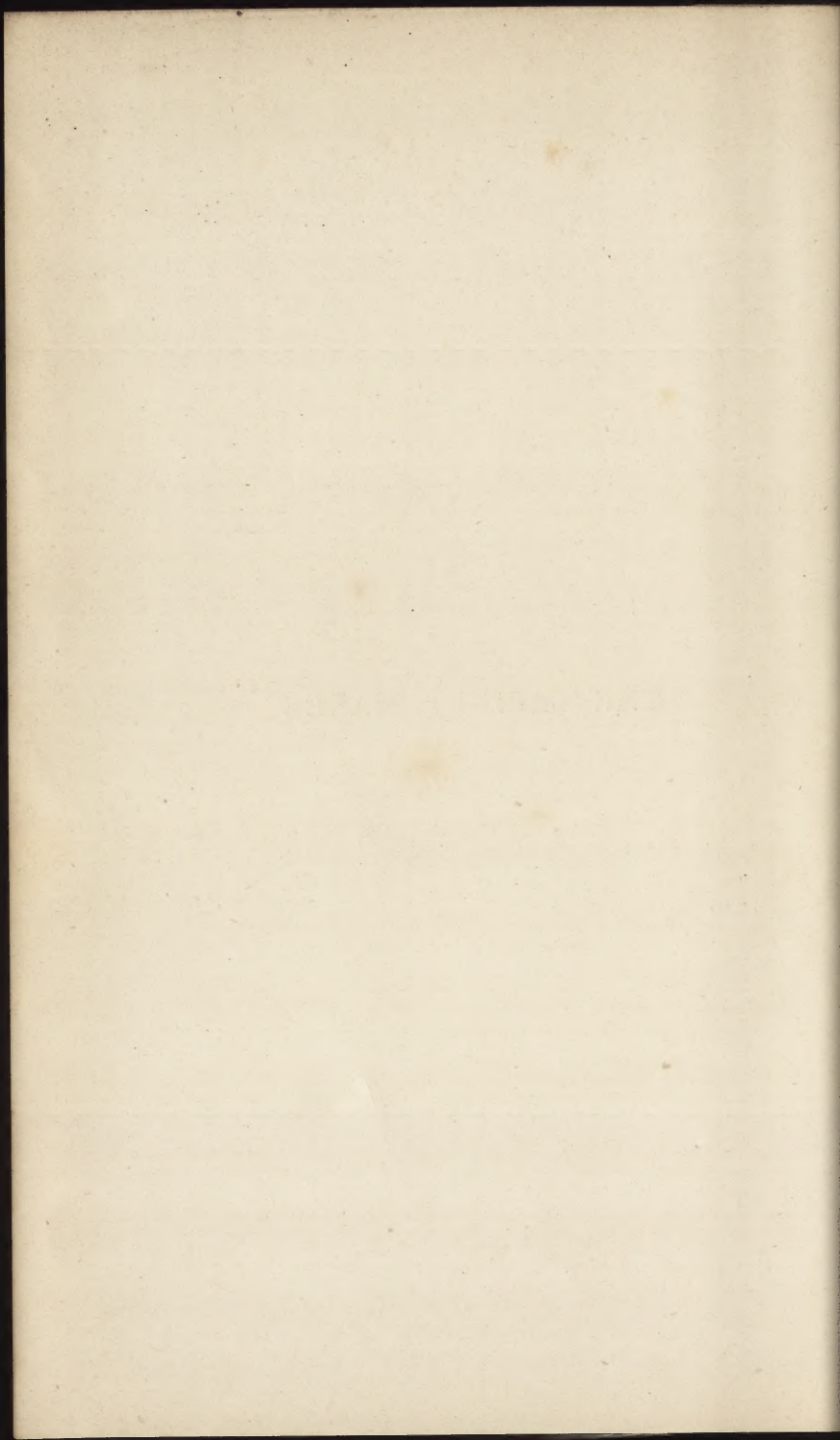
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THE CABINET MAKER.



THE CABINET MAKER

A Practical Guide to the

*PRINCIPLES OF DESIGN, AND THE ECONOMICAL AND SOUND
CONSTRUCTION OF HOUSEHOLD FURNITURE,
FURNISHINGS, AND FITTINGS*

TOGETHER WITH

TREATISES ON THE DESIGNING AND SETTING OUT OF MOULDINGS, AND OF
ORNAMENTAL OR CUT-WOOD WORK

BY

VARIOUS WRITERS

EDITED BY

THE EDITOR OF "THE INDUSTRIAL SELF-INSTRUCTOR"

With 10 Folding Plates, and 62 Illustrations in the Text.

WARD, LOCK, BOWDEN, AND CO.

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1892

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PREFACE.

THE matter which makes up the greatest bulk of the present volume under the title of "The Cabinet Maker," like that which forms the other volumes of this series, known as the "Practical Mechanic Series of Technical and Industrial Works," appeared originally as one of the continued papers in the well-known serial *The Industrial Self-Instructor*. From the position which these papers on "Cabinet Making" took, and the estimation in which they were held by the readers of that serial who were interested in the subject of cabinet making, it was considered by the conductors of the present series of volumes that a very useful addition to their number would be one devoted to the technical interests of those who were engaged in the important work of designing and constructing what may be called the furnishing appliances of domestic households—this comprising not merely the articles known generally as furniture, but the other appliances which add so much to the elegance as well as comfort of the house, and which usually fall under the designation of upholstery and decorative work.

In carrying out the scheme of the series of papers under the general and comprehensive title of "Cabinet Making," the aim of the author was not merely to give information on what may be called the constructive features of the art—although this was by no means overlooked or done scant justice to—but what he kept steadily in view was impressing the youths who proposed following cabinet making as a means of gaining their livelihood with the great, the all-essential importance of giving thought to their work, in the matter of design of the various articles and household appliances which they would in the course of their work be called upon to construct. The author was led to this course in view of the too numerous evidences which can be had on every side, if only carefully looked for, in our houses or in the warehouses of those who deal in furniture and furnishing appliances, of the utter lack of correct principles of design in a large number of the articles in daily use in our domestic households. Many of these form in reality such monstrosities of design that it may well be doubted whether any thought was given to the purposes of household convenience, utility and comfort, which articles of the kind are supposed to subserve. At the same time, in his endeavour to take a just and accurate view of the causes which have led to the principles of true design being so widely set aside or overlooked, the author has taken special care to name the influences which are daily at work, which prevent the makers and sellers of household furniture

and furnishings from supplying to the public, articles more in accordance with the true principles of design in cabinet making. What those influences are the reader will find fully detailed in the text. The whole subject of Design as applied to Household Furniture and Furnishing will be found gone into with a fulness and clearness of detail and of illustration which the Editor of the present volume believes is not to be met with in the majority of books or papers devoted to the subject. And he can only express the hope that they will be widely and carefully studied by at least the rising generation of those who purpose devoting their working lives to the important department of what may, in its widest sense, be termed Household Furnishing. If this study be given, and if practice in any moderate degree be allowed to be influenced by what is given in the way of counsel in the text, it will do much to bring about that reform in the art which its most advanced and enlightened and most practical of authorities deem so essential if our household furnishing is to be designed and carried out on the lines of true design.

As being more or less closely connected with the special subject of the volume, it has been deemed advisable to add two sections which also originally appeared in the same monthly serial in which the papers on Cabinet Making were given. These two sections comprise a series of instructions and illustrations on "Ornamental Work in Mouldings" and "Ornamental Wood-work." As regards the first named of those two subjects, little need be said to show its appropriate connection with the general work of the Cabinet Maker. Of the second subject this may be necessary to be named: That it comprises a series of practical instructions and illustrations explanatory of the principles which should guide the worker in cut-wood in designing the form used to decorate or render pleasing to the eye such parts of structures as barge boards of houses, eaves and hanging ornamental parts in such timber structures as summer-houses or kiosks as they are sometimes termed. Those who have travelled much in Continental countries, if at all observant, must have noticed how much more widely ornamental structures in wood are met with than with us; and the Editor hopes that what is given in the text under this head will have the practically useful effect of very considerably adding to the already too few specimens of ornamental wood-work met with in our own country. Taking the volume as a whole, with its three sections, the Editor has some confidence in placing it before those interested in technical and industrial work as a volume likely to be of great practical service to them.

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THE CABINET MAKER.

Introductory—Names of Technical Trades do not always give an Index to the Nature of the Work or the Materials employed.

IN glancing at a list of the names by which the various branches of our industrial callings are distinguished, one peculiarity is noticeable. The names do not always indicate the materials which are employed by the various workers, so as to give a direct clue to what their work actually is. Some, on the contrary, are distinguished by names which at once tell us what their work is, and sometimes the specific material employed or chiefly employed in it. Of the first class we may cite as instances the trades of the joiner and the carpenter. The first of these names conveys not even the faintest conception of what the trade actually concerns itself with. The term "join" is by all, of course, understood; but it might be applied to the joining together of any materials, or of more materials, however diverse in character, than one. There is nothing in the name to convey definitely an idea of what the work of the joiner really is—this being simply the working up of timber into the various forms and fittings required in the interior (chiefly) of our domestic and public buildings. And it is probably from the circumstance that on the accuracy of the joints by which the pieces are held together the perfection of the work has been estimated, that the term joinery has been selected to designate this special class of work, as if to indicate that unless the joints were well made the work would be worthless. But it is obvious that the term or name might be given *per se*—that is, by itself, simply—to a worker in iron, or a machinist, both of which trades have a great deal to do with joinery; in fact, their work actually is the formation of structures by the joining of one part to another till the whole is completed. And in this sense, strictly taken, almost any of the constructive or mechanical trades might be called joinery with as much accuracy as in its usual designation, if at the same time, to give a definite meaning, the material the trade used was added, such as a joiner of metal, joiner of wood, of stone, etc.

Of course, by long usage, and as it were a species of traditional

descent, every one knows what is meant when we speak or write of the trade of a joiner, just as every one knows what the special work of a carpenter is; although, so far as the names or words themselves are concerned, they give no clue whatever as to the precise character of the work. Thus, a person who had no traditional knowledge to fall back upon, who had not been accustomed to hear on all sides what such callings really were, and what the character of their work was, would never gather from the mere trade name of "joiner" that his work was such as we have above described it to be, any more than he could from the name "carpenter" the fact that his occupation was the formation of parts of timber structures out of large pieces of wood, just as that of the joiner was the using of wood in small or comparatively small pieces. The same indefiniteness is met with in the word masonry, and it is only—as is very usual—when the special trade is designated, as that of the stone mason, that we know that stone is the material with which he deals, and the shaping, cutting, and "joining" of separate pieces or blocks of which he forms his various structures the special work.

The Names or Designations of Some Trades give at once an Index to the Nature of the Work done and the Materials employed.

Other trades, however, there are about which there can be no doubt as to what the special character of their work is. Thus the names of Painter, Plasterer, Cotton Spinner, Cloth Weaver, Machine Maker or Machinist, Gas Maker, indicate at once what the work of the trades is, and give clues more or less direct and specific as to the materials they use. If the reader will think over the point here named, he will perceive that there is more in it than appears at first sight, and that nomenclature is or should not be a mere dead thing, but one of vitality, exercising an influence, when rightly applied, for good. If it be true, as some philologists—and we confess with great truth—maintain, that the *morale* of a people is largely indicated by the terms, the phrases and the proverbs of its daily life, it is difficult to escape from the conclusion that there is something indicative of the practical tendencies of a people in the names by which they designate their various occupations. If precise definition of scientific terms, or of the materials employed in the arts be—as it is universally acknowledged to be—of great importance, it can scarcely be denied that some importance at least is attached, or should be attached, to the mere nomenclature of our technical callings. It is at least a satisfactory—and to the mind appears to be a fitting thing—when the name we employ conveys as directly as possible what in reality is its chief, if it be not its only characteristic.

Technical Lessons derived from the Names of Trades—Cabinet Making.

The last-named point to some may seem to be a matter of indifference, but to those who are not content to skim over the surface of a subject, it will be found to be the reverse of this, and to carry with it something practical in its application to the work and the purposes of daily life. Precision of expression is surely more solidly satisfactory than vagueness, and matters are not mended, but are worse, when not only is precision sacrificed, but a wrong impression is conveyed as to what the work actually is; leading to the belief that it is only one thing which is meant in place of a variety of things. Very much in this way does the term "Cabinet Making" operate. The meaning of the term cabinet is pretty generally understood when reference is made to the fittings of our houses, but the term cabinet maker does not apply solely to a workman who makes cabinets and cabinets only. True, he does make these articles of interior fittings, but it is well understood by all that he makes something more. In point of fact, the cabinet maker, as the term is now universally understood, is one who makes those interior fittings for our buildings which go under the name of *furniture*. And although other trades have and require their furnishings or furniture, as the actual phrase is—for example, the "door furniture" of the joiner, as locks, hinges, escutcheons and finger plates—the term is generally accepted as indicating only the interior fittings or furnishing of our domestic buildings. Properly speaking, these interior fittings are of two classes of work—namely, of the joiner and of the cabinet maker—but the work of the joiner is confined to the fittings, such as architraves to doors and windows, skirting boards doors and windows which are fixed in position, and form, so to say, integral parts of the structure or building; whereas the interior fittings of the cabinet maker are all movable or capable of being changed in position as desired.

The Work of the Cabinet Maker comprehensive in its Character.

The work of the cabinet maker being then, as we see and all generally know, of a more comprehensive character than that concerned solely in the making of cabinets—embracing all the parts which constitute what we call domestic furniture, as well as the classes of ecclesiastical furniture, etc., etc.—a more precise and definite name for the trade would have been "furniture maker." No doubt this has in reality been employed, and is still employed by many. But, arising no doubt, as we suspect, from a notion that there is something—no matter what—derogatory or undignified in this the plainer and more definite term, as it is apt to be confounded with

the more humble occupation of a furniture dealer, this name furniture maker is generally disused, and what appears to be the finer phrase cabinet maker is employed.

Suggestive Character of the Early History of Furniture Making.

It is something more than interesting—it is often suggestive of something practical—to trace the history of an art or the progress of an industrial calling. And if we do this in the case of furniture making we find some explanation as to how the term cabinet making came to be applied to the art. Furniture strictly so called, as indicating the interior fittings of our rooms, is divisible into two great classes—first, those pieces which are required to be moved more or less frequently, as tables, chairs, and couches or sofas; and second, those which, once placed in the desired position, are kept there. Although furniture fittings are in the strict sense of the term movable, as contrasted with the fittings of the joiner, which are fixed, this mobility is thus seen to be relative only—one part of furniture being fixed, as a rule, the other part capable of being shifted from one position to another. In the middle ages, that period in which the furniture of houses occupied a distinguished position, and engaged the services of the first artists and the most skilful workmen, its distinguishing feature lay in the *cabinets*, the great chests or coffers, or the presses. Upon these, distinguished as they were from their prominent size, all the ability of the artist, all the skill of the workman, was lavished. And as this class of furniture required of necessity the greatest care in its construction, it would in time come to be looked upon as what may be called the test work of the artificer. So that if he could construct—all the better if he could also design—a fine cabinet, he would as a consequence be able to make the lesser pieces of the furniture of apartments; and as the greater includes the less, he would come to be termed a cabinet maker—just as if the term cabinet making included all the lesser work of interior finishing. Furniture in the widest acceptation of the term, while it is essential as ministering to the comfort and to the conveniences of daily life, may be made also to conduce largely to its intellectual pleasures. While useful it may be beautiful. And when once a more healthy, because a more correct idea of what the beautiful truly is, and what the high office which it fulfils, becomes a part of our intellectual and we may say moral education, it is beyond a doubt that the furniture of our houses will be looked upon in a greatly different light from what now generally, we may say universally, it is. We shall then have our furniture beautiful as well as convenient.

Furniture: its Characteristics; and some Points in relation thereto.—Beauty and Utility, both frequently sacrificed for the Sake of Cheap Work, and sometimes not at all considered.

To those, however, who have got the notion that our furniture is beautiful because it is pretentious, or to some who take even a lower view of the matter, and decide that it must be beautiful and good because it is costly, what is said at the end of the preceding paragraph must appear a strange, if not a startling conclusion to arrive at. Judged by an artistic or æsthetic standard by no means high, this is the only conclusion one can come to who honestly looks at furniture as it now pretty generally is, and frankly states his opinion of it. For when judged by the higher standards of artistic beauty, too much of our modern furniture is seen to occupy a position but little removed from the utterly barbarous in art. Those who may be disposed to doubt, indeed flatly to deny this, have but to examine the records at once documentary or written respecting more artistic furniture, or better still, the specimens which fortunately have been handed down to us as ocular evidence of what furniture was in times long gone by. It is not that money is now grudged by those who possess it: it is in other ways, and even in point of fact in this department, expended as lavishly as it is expended with little or no true artistic satisfaction. Nor is it that those who possess means are unwilling to have really beautiful surroundings in their houses. The truth would seem rather to lie in this direction: that, however desirous they may be to get beautiful furniture, it cannot always be had, for it is not now often made. To this, according to our highest authorities, the exceptions are lamentably few; and even where exceptions exist, they at their best fall far below the magnificent work of bygone times. At the same time it is only right to say that those who have abundance of money have not always an equal supply of taste or a knowledge of what constitutes the truly beautiful. And if those had this, it is obvious that they would possess a great power in bringing about a higher and more satisfactory state of things in regard to furniture. For of this they may rest assured: that if they refused to have, no matter what it was which tradesmen offered them in the way of furniture, and would pay only for what they knew to be of a higher class of beauty, the tradesmen would very soon make an effort to meet the wants of their customers. They are but too glad to find a market for their goods; and if these be false in taste, meretricious in design, the fault lies very much with the public, whose taste—if the term be here permissible—is false, so that they will have what they believe to be beautiful, but which all rules of art too easily prove to be the reverse, or anything but beautiful.

But, as we have said, it is not so much a matter of money. For it may be accepted as a truth, certainly in connection with furniture, that the same cost of labour and material will give in one case an article truly beautiful, in another one positively the reverse. And this, be it observed, does not apply to simple objects of comparatively small cost,—it applies with equal force to the most lavishly ornamented and the most expensively constructed articles of furniture. With some, indeed, it seems to be a settled thing that if you only put labour and material upon a piece of furniture it must be beautiful. Hence the monstrosities we see sometimes, in which costly construction, expensive carving, and “no end of ornament,” gilding, and the like, strive, so to say, to be the most obtrusive—giving as a result objects which a man of cultivated taste would not have at any price, to which on no terms would he give, as the phrase is, “house room.”

Lack of Ability to Design, rather than that of Skill to Construct, frequently shown in the Work of the Cabinet Maker.

If this be true—and it will, we take it, be somewhat difficult to refute—it would appear that what is wanted is not so much skill to construct as ability to design. Of the skill to construct in the best possible way there is no lack amongst our workmen, provided they be paid for it, and paid well—for a dissatisfied workman is rarely a good one; provided also,—for there are two sides to this bargain,—that being well paid, the workman who can work is so honest, and takes such high pride in his calling—which is the only guarantee for good work—that he will give the very best he is capable of. But if good work can be had easily enough, and can certainly be increased to meet any demand (for merely mechanical skill is by no means so rare as some seem to think), the same cannot be said of good design. The shortest way to excellence would of course be to gain the combination so common in the too much despised middle ages, when the workman was almost always an artist. Failing this, the next best thing to aim at is to get good designers. Good workmen to carry out those designs would, as we have said, be got with comparative ease, for of a given number of artisans by far the largest number will be found who are capable of being educated or trained to be clever and skilful constructors—with whom nothing could be done worth the result of the labour bestowed in the way of making them designers.

Improvement in the Work of the Cabinet Maker.

While, however, making such strictures as we have deemed it right to make on the position which, as a rule, furniture as an art manufacture occupies at the present time, and while asserting what we

have, with but little fear of having our assertions proved to be wrong, if facts as they exist around us, and which can be gathered from the houses of the great majority of the people, be appealed to as the only source of facts, we at the same time are far from denying that improvement is now being made. We are, on the contrary, only too glad to admit that it is so, and to point with pleasure to the fact that it is something more than merely at the first point of initiation. The improvement made within the last few years is beyond doubt something more than merely tentative or initiatory. It has in some quarters made large advances, and a very much higher and healthier tone exists, and amongst a very much wider class, than existed even so short a period as ten, or say a dozen years ago. To quote the words of one who himself has done as much as any one in this particular branch of manufacture to raise it to that position in which it is worthy of having the prefix of "art" attached to it, "That advance has certainly been made; a reaction from ugliness to beauty has touched at least some part of the people who live among civilization, and in what we technically call the decorative arts. This new *renaissance* has been helped in this country by many agencies, not least among which has been the steady endeavour on the part of the Department of Science and Art to spread artistic education among the public in general." And the result of this, so far as the branch of art manufacture of furniture is concerned, is—again to quote the words of the same authority—such "that any one can now find in shops all over the country goods at commonplace prices, which both are intended to be and are beautiful, and more or less marked by artistic individuality; that, in short, any one who chooses can make the interior of his house comely and pleasant without an unreasonable expenditure of time and trouble." But we should be taking but a low estimate of the duty we owe to our readers, and paying but poor allegiance to the cause of the development of artistic taste amongst all classes of society, if, while fully admitting the truth of what the authority we have quoted says as to the *choice* open to all to have new furniture of higher claims to beauty than was possible to them but a few years ago, we failed to point out that the misfortune of the thing is that the great majority of the purchasing public do *not choose* to "make the interior of their houses comely and pleasant." And this not because they are absolutely unwilling to do so, or are indifferent either to comeliness or pleasantness, but simply from the fact that their artistic taste is so poorly developed. Or, to put it more truly so far as a vast proportion of the public is concerned, it has no existence, so that they do not actually know how comeliness and pleasantness, in so far as those

are dependent upon and created by the beautiful, are constituted, and upon what principles they depend.

Artistic Taste requires Development before Beauty in Furniture can be understood or appreciated.

The above may seem to some of our readers a very harsh decision to arrive at; but we appeal with all confidence, in proof that it is but too true, not merely to the opinions of those who are in every way qualified to give it, but what is better, as it will be more convincing, to the facts and circumstances of every-day life by which we are surrounded. No doubt those who possess these "surroundings" may well say, as many no doubt would if appealed to, that they are perfectly well satisfied with them, that in their estimation they are comely and pleasant—in short, in their eyes beautiful. This, however, is but, as it were, Cæsar appealing to Cæsar, and he who makes the law is likely to think well of it. But the point is not whether what they deem to be beautiful, as being comely and pleasant, constitutes the beautiful in reality, but whether their conceptions are based upon the principles which, according to authority beyond all dispute, guide, dictate, and create the truly beautiful. And tested thus, there is but one conclusion open to us—namely, that the opinion we have above stated is simply the true one, and that the great majority of the purchasing public do *not* choose to avail themselves of such sources of obtaining furniture "comely" and "pleasant," and in so far therefore "beautiful," now open to them, and this because their artistic taste is so little developed that they have even at the best but a faint conception of what really does constitute the difference between that which is and which is not beautiful.

Wide Lack of a Taste for Decorative Art amongst the General Public.

But while this is true, it is true also, and unfortunately for art, that another and a very large, perhaps till larger section of the purchasing public, do not choose the comely and the pleasant, simply because they do not think that any choice is at all necessary. They simply buy what their neighbours buy, or buy with as much exercise of thought of their own in the one case as in the other, what the maker or dealer chooses to provide for them. And it is scarcely necessary to say that but too many makers and dealers purposely, if thoughtlessly, do provide what is neither comely nor pleasant. We corroborate this assertion, made with all due consideration, by the opinion of the high authority we have already quoted; and we do so inasmuch as, whatever some of our readers may think, the majority will join with us in believing that the whole question is one so fraught with practical importance of the highest kind that its con-

sideration must not, should not in the true interests of the reader, be passed lightly over. For in truth the art education of a people is no light matter, and lies very much nearer to the heart of our social and moral progress than some wot of. What, then, says our authority on the point we have above given expression to? While gladly admitting the great improvement made in the art manufacture of furniture during the last twenty-five years, he goes on to say, "I am afraid I must admit that the general public are *not touched at all*" (we purposely italicise these pregnant words) "by any interest for decorative art; a *few* of the upper and middle classes *only* have as much as heard that there is such a thing as decorative, which should be popular, art." The same authority goes on to explain how this miserable state of matters has come about. He points out that for long—and, indeed, it is only within the last quarter of a century that a change has taken place for the better—commerce "so called," as our authority puts it, actually insisted upon divorcing art from all branches of manufacture, "forbidding the exercise of art as an essential part of manufactured wares." And although, as we have seen, matters are mending a little, it is but such a very little that there is scarcely one branch of our manufactures—if there be indeed one—but what produces both ugly and beautiful; while the greater part of production belongs assuredly to the first rather than to the second category. But the worst part of the case remains—for, as our authority says, the ugly things are bought by the public as readily as the beautiful. And the still greater misfortune is that this is likely to be so for some time, inasmuch as, under the present system at all events, it is so much cheaper to go on manufacturing ugly things established in the market than to go to such additional expense as to produce new things which will be beautiful, or at least possess some claim to this distinction. The summary of the matter may be put in the words of our authority: "At present the divorce of commercial manufacture from art has made the public bad marketers; too often they don't know what they are buying."

Remedy for this Lack of Taste for the Decorative Arts on the Part of the General Public.

How, then, is this state of matters—pitiable enough, from an artistic point of view, it must be confessed by all thoughtful people to be—to be remedied. We have already said, in connection with another part of the same subject, that improvement rests with the people themselves. There is nothing like looking facts as they exist around us plainly and fully in the face. This is the only way to arrive at a practical result. It is folly to do otherwise: to pretend

or try to convince ourselves that what we would prefer, or what we merely suppose, without any ground to base a reasonable supposition on, constitute facts. This is what no sensible man in any calling or walk of life does; he deals with facts as they are, not as he might wish or suppose them to be. And we shall witness an improvement in the development of public artistic taste so soon—but not sooner—as the public themselves begin to see that art really closely concerns their social and moral position, and seeing this, determine that art education shall be general, not confined, as it is now, to a special class supposed popularly to be the class alone interested in it. We have said that a general art education is no small matter, to be passed lightly over, and those who wish for better things can at present only wait, with such patience as they can infuse into their souls, for the coming of the better times.

Rules, Canons, or General Principles of Design—introductory to the Consideration of Design as applied specially to the Work of the Cabinet Maker.

In what is called the art of design there are certain rules or canons, or what in science would be designated as laws. Concerning these there is an almost universal consensus of opinion that they are deserving of the name, inasmuch as they cannot well be disputed. At all events, it may be said of them that by far the great majority of those interested and engaged in one or other of the applications of what for lack of a better term is called design, accept them as correct, and as points about which no dispute is to be allowed. There are many features, however, connected with the art of design which take the form of mere opinions. These are held by different men, according to the views which they individually hold as to what in certain features and under certain circumstances good design should be; and with many as frequently those views are often just as much the result of prejudice as of careful thought and observation. It need scarcely be said, therefore, that there is ground for dispute—and of this there has been enough, and more than enough—as to the value or otherwise of opinions or views so created and upheld. To some of these we shall draw the attention of the pupil-reader, especially where they have been put forward with special persistency, and have by this means gained a currency more or less wide. And in so drawing attention to them we shall endeavour to point out in what respect they are valuable, and therefore to be adopted by the young designer, or in what respects they convey what appear to be erroneous views, and which, therefore, should be avoided by him in his practice.

Meaning of the Term Design in Relation to Decorative Art.

We have said that for lack of a better word the term "design" has been applied to convey an idea of what is meant when we wish to attach to any object another characteristic than that which is derived from or belongs to its mere utility. And this added characteristic is given purposely, in order that the eye may be pleased on looking at the object, and what is called "taste" gratified in the possession of it. When this added characteristic is present in an object otherwise merely useful—that is, which serves the purpose for which it is made, be it a jug or jar to hold a liquid, or a table upon which that jug is placed—we then say that the object is beautiful as well as useful. The term "beautiful," as we shall see, is purely relative, and it is a term which is more abused and misunderstood than even that of "design," with which we are now concerned. We discard, then, for the present at least, the term "beautiful," round which clusters so much that is mere matter of opinion, and has therefore never been concreted into anything like canons or rules about which men are agreed; and we prefer to say that when the characteristic we have above named is added to an object, it is more pleasing to the eye than if it did not possess that added characteristic. About the fact that it is more pleasing to be looked upon there is no dispute. It may be, for example, that if the straight outlines of any merely useful object are so treated that they have a certain form given them by curves or by curved surfaces in relief, these curves and surfaces may be objects of dispute between those who view the object so treated. One may say that the curves used are not those which should have been used, or the curved surfaces are false in conception. Another may hold an opinion respecting them quite the opposite of this. But both or all admit that the object, with its new or added treatment, whatever that may be, is assuredly more gratifying to the eye—that is, it is more pleasant to look upon, than when in its original form with its straight lines.

In the accepted phrase of the day, an object so treated is said to have "design" applied to it; or that it has been well or badly—as the opinion of the critic may be—designed. The term "design" is so far unfortunate that it tends to vagueness and often to grave misconception; and it assuredly lacks the definite precision which should, if possible, be the characteristic feature of all the definitions of terms of art and science. The true and original meaning of the term is conveyed in the idea that we propose to do a thing. In other words, design involves a purpose or object in view. If we have, for example, an object to construct, and if we construct it so well that it answers all the purposes we had in view, and there are

secured by the least expenditure of material and of labour in working it up into the finished object, we then say, as it is said by an approving public, that it is well "designed." The term may indeed, and generally is, applied also to any scheme which is purely mental—as the plan of a book is said with perfect truth to be well designed. In all work there is a purpose to serve, and to effect this is the very motive of the work connected with it. Reverting to the subject of a construction, we have seen that it is said to be well designed when certain conditions have been observed. But this construction may make no pretensions to giving form which is pleasant to look upon; may have not a single characteristic to which the term "beautiful" can in any sense be applied. It may, indeed, on all sides be pronounced unmitigatedly ugly, yet from its original and true purpose it is worthy of being pronounced as well designed. But if any one claimed for it that it was a "good design," a very different train of ideas would be brought up in connection with the object; and a war of words would assuredly ensue if to its mere utility something had been added which was supposed to give the characteristic of beauty to it. But if not, the term "design" would not be permitted to be applied to it all, for it would be said that it had no "design" about it. And yet, beyond all doubt, the object was well "designed," for it fulfilled all the essential conditions of the "purpose" the "designer" had in view.

Confusion of Ideas arising from the Generally Accepted or Popular Meaning of the Term "Design."

This confusion of ideas, this uncertainty, as to the meaning of the term design arises wholly from the lack of precise definition in the term design, as it is now almost universally used. It has got by some curious process or turn of circumstances to be associated wholly with something done in the way of adding to objects of all kinds that characteristic we have referred to, by which they are said to be more or less beautiful, certainly more pleasing or gratifying to the eye, than if not so treated. But if in the true sense of the term "design," "purpose" is involved—and no one will deny the accuracy of this—if that purpose be fulfilled, a work of any kind is just as well entitled to be called a "design" as the work of an artist, to which the term is almost universally alone applied. If there be any meaning in the word "design" at all, the conclusion is inevitable that there must be several varieties of design, as there must be numerous classes of designers. A school in which nothing but the principles of scientific construction are taught has as much right to be called a "school of design" as a school in which drawing and its

application to various branches of industry are alone taught, and to which the term "school of design" is equally well, and indeed now universally applied. Yet one would never dream that in the first instance it involved the teaching of construction; while every one would know, as indeed every one knows who knows anything at all, that by the term "school of design" nothing, in ordinary language, more nor less and *nothing else* is meant than that it is a place where *drawing* and its industrial applications are taught. "This and nothing more."

Practical Importance of the Confusion of Ideas arising from the Generally Accepted or Popular Meaning of the Term "Design."

The point is one of great importance—not being merely a play upon words, as some may think our remarks to be. If the pupil reader, with the aid of what has been here given, and will be also found in the volumes of this series in which drawing and design applied to various materials are treated of, will only think the matter well over, he will perceive that, so far from being a mere trifling about words or terms, what has been said involves principles or considerations of the highest import, closely concerning the true interests of the art of industrial ornamental design. One of the ablest masters, as he has been one of the most practical teachers of artistic design as applied to industry, in discussing with the writer of these lines the past work and the future prospects of art manufacture, remarked that he knew of nothing which had so greatly retarded the progress of this as the unfortunate—so he termed it—name "schools of *design*," which had been given to those institutions the object of which was to teach the principles of artistic drawing and to show their application to manufacture of all kinds. This term has arisen from the fact that it was borrowed from the French term *dessein*; with a most unfortunate misconception of the true meaning of the word.

The term or name "school of design" has, however, got so thoroughly naturalised amongst us, that it is hopeless to expect that it will be changed for one much more definite, or rather, so definite that it will convey precisely, and no more nor less than, what is truly involved in the subject. "Artistic design," "ornamental design," would be terms so far definite that no one could possibly confound them with such a term as "constructive design," to which class of work we have shown that the term design is as truly applicable as to artistic design. But it would have been better had a name or term still more definite in its meaning been applied, such as "artistic drawing" or "ornamental drawing" or "art drawing," or still more

simple, "drawing." Few but know what drawing is; but seeing that there is more than one kind of drawing, such as mechanical or geometrical drawing, all obscurity would have been, and would be, avoided if certain of the terms above named—"artistic drawing" or "ornamental drawing" or possibly as better "decorative drawing"—had been daily, or were used. What remains, now that the term schools of "design" is so crystallised or solidified in our language, is to indoctrinate the pupils as completely as possible into the true meaning of the term "design" and all that this meaning involves.

The Term "Design" as involving a directly Practical Purpose.

We have said that the term design involves a "purpose." Much, very much, of the progress of the pupil in the application of the principles and practice of artistic drawing or ornamental drawing to the work of cabinet making—or, indeed, to that of any other branch of art manufacture so called—depends upon his thoroughly understanding all that is involved in this word "purpose." If he intends to work at all, that work must be preceded by, based or founded in fact upon, something which he proposes or purposes. Let him keep this purpose steadily in view. What, then, is it that the cabinet maker and upholsterer—for it is difficult to separate the two callings—purposes to do? Put in few words, it is this. To make, in the first place, articles of furniture which will serve the purposes of that *utility* which is the very reason of their existence, the primary impulse which brings them into being. The second purpose he has in view is to give to such useful articles or objects such characteristics as will make them pleasant for the eye to look upon. We prefer to put the point in these words rather than to use the term "beautiful," which is so much disputed—or the phrase "to gratify the taste"—the latter being not a whit less disputed than the former term.

Ornament and Construction.

This effect, which we thus call pleasing to look upon, or pleasant to the eye, is obtained by two added features: one is "form," the other "colour." When these are added we say that the "constructed" article or object is "ornamented." And we then come to the phrase about which much has been both spoken and written—"ornamented construction." As illustrative of the confusion of ideas which has clustered most unfortunately round what is called "art," it is worthy of distinct mention here that this term "ornamented construction" has been applied with strange persistency to define what *architecture* is. Just as if buildings were the only objects in which construction was concerned; as if we did not construct other objects—such as a

chair, or, to take one larger and more expensive, though not a whit more useful in its way than a chair is—a railway bridge or a scaffolding. We thus perceive what the “purpose” of the cabinet maker and upholsterer is in connection with what is generally called the furniture of a house. He has, or ought to have, a distinct purpose always in view—that is, he must “purpose” to do something. What he has to do we see, and it is beyond all doubt a dual or twofold purpose. He has to consider the claims of the useful—of utility—and also those of what, for lack of a more precise term, we call here ornamental.

Purpose in the Designs of the Cabinet Maker.

It seems to be but a paradoxical way of putting the point to say, in respect of the first of those claims upon his “purpose,” that the cabinet maker must make his objects serviceable for the work they have to do, or they cannot be useful. This, however, is so far from being a mere play upon words, that it lies at the very root of the work to be done—although beyond a doubt this inherent importance is too often overlooked; and so overlooked that while the second of the claims—that of ornament—is so fully met that the designer may arrive at an arrangement of form and colour so effective as on all sides to be freely admitted that as an artistic design it was good, yet the object so ornamented might be utterly worthless for all purposes of utility. What conclusion, then, is to be drawn from this? Mainly, the important canon or rule that *all added ornament, whether of colour or of form, or as it may be otherwise termed “decoration,” or of both, must be subservient to the purposes of utility.* This, as we have said—and it cannot be too thoroughly apprehended by the young cabinet maker—is the very reason of the existence of the object, the very, and strictly speaking, the only purpose for which it is made. A chair, if it suits the purpose for which it is made, fulfils its office perfectly so far as construction is concerned; and its owner can dispense with ornament being added to it, without any actual loss. It is only when a higher value is attached to the object, and something gained in another way, that ornament is added to it.

Utility an Indispensable Feature in the Work of the Cabinet Maker.

Utility is therefore simply essential to be considered; and that being once secured, attention can then be turned to ornament. What, then, does utility convey? Clearly, two things: the object must possess “strength” to enable it to stand all the pressure put upon it—in other words, it must be able to be used so as to stand “usage”; secondly, it must be made to serve the purposes of “convenience” in

use. Strength and convenience, or to concrete them into a single word, "fitness" for the purpose in view, must be duly considered in aiming at the utility of an object. A chair, for example, might be made strong enough to resist the sudden descent upon its seat of the weight of a giant, or a Daniel Lambert, and to withstand every kind of cross strain he could put upon it; and yet it might be so made that it would take a giant's strength to move it from one place to another or even to lift it. Mobility thus forms a feature in the utility of certain objects of furniture, and gives rise to its two great classes: first, those articles which are moved, or can be moved, easily from place to place in the room; and second, those which, although not absolutely fixed, are so intended to remain in one position, as a rule, that they are termed fixed articles or objects of furniture.

**Fitness and Convenience Points to be considered in Furniture Design.—
The Work of the Old Cabinet Makers.**

"Fitness" for the purpose for which they are made, "convenience" for the way in which they are used, are, therefore, the essential characteristics of objects or articles of furniture. And these two may be summed up in the one word "utility." And this attribute the objects must possess, otherwise they may as well not be made. How far the attainment of this the primary purpose of all objects of furniture is secured, we have but to look around us with careful observation to see. The more this examination is made with scrupulous care and with a mind unbiassed by any trade or personal prejudices, the more clearly, we fear, will the truth be made known that in but too wide a class of furniture designing and making, and in too great a variety of objects, the attainment of the attribute we have seen to be essential is far from being secured. In very many cases, indeed, this essential attribute of utility is attempted to be secured, but in a very perfunctory and careless way; in not a few it may be said with all safety it is not secured at all. Many articles of furniture are daily disposed of, in which, for the strength which gives fitness we have but flimsiness, for thorough convenience only clumsiness. Utility in such cases, in the practical sense of the term, does not exist, or only in the most straitened and narrow of ways. To how much of the furniture of the present day is the saying thoroughly applicable—"they are made to sell"? To be made for use has in no wise been considered by the maker. We may sneer at the inelegant clumsiness of the furniture of our forefathers, and contrast it with complacency with the trim, the pretty, and "genteel" (?) articles of our own day. But the comparison, if made with an honest purpose, is altogether in favour of the old-fashioned furniture, as, with a sort

of pitiful tenderness, it is called. It might be, and very often, perhaps, as a rule, always was, clumsy and heavy; but it was sound. It had honest workmanship about it: indeed, in every, even the minutest detail of construction, the most scrupulous care was taken to give the very best work of which the workman was capable. He then thought of something more than profit; principle was not overlooked. So that of the workman of old it could be said, with almost universal truth, that he was a "workman which needed not to be ashamed." And much as we may now talk of this cause and that cause, to account for the decay of trade and the various ills which on all sides are admitted to affect callings of all classes, we fear that this cause is but too often overlooked,—the lack of pride, or rather we should say of principle, on the part of the workman in his work; nor less should it be here added, on the part of his employers who *sell* what they know not to be good and true. It would be well, when we are singing pæans of praises in honour of our high civilisation, to remember the period in which, if civilisation, as looked at from our point of view, was low, principle and the exercise of it was high, and held in high esteem. This consideration applies to us all—workmen by the hand, workers by the brain—earnestness and honesty of purpose and of life, even in the meanest of work, are what alone give value to it.

The Character of the Materials used in the Making of Furniture a Point of Great Importance.—Old-fashioned Work as compared with New in this respect.—Practical Lessons to be learned from this.

But not less marked in the furniture of our forefathers was the materials they used. Common sense enough they had, if they sometimes lacked our artistic sense; and this common sense told them that it was but folly to put the highest class of workmanship, which would last for generations, upon material which, being of poor quality, would not live out half the period. The "stuff" they used then was of the best; and of many of our furniture makers it may be said that they also are wise in their generation, and use also, in their view of the matter, their common sense too. For, knowing that the workmanship they give to the articles is calculated to keep the articles together only sufficiently long at least to hold out till they can be "sold," they wisely give materials which are quite in keeping with the workmanship. They very naturally argue in a way the converse of the old, honest workman, and conclude that it is folly to give materials that will last so very much longer than the bad workmanship which serves to keep them together for the very minimum of time. Both as regards workmanship and materials, a

large proportion of our modern furniture is thus and therefore practically worthless. We do not here enter into a consideration of the question how far the blame of this is to be laid on the maker and the seller, and how far implicated in the matter is the purchaser. No doubt the rage for cheap things simply as such, without any, at least without a due regard to their true worth or their utility, does lie, to a large extent, at the root of the system which admits of bad work and worse materials being sent out. Those who live by the system assert that this desire on the part of the public for cheapness actually *compels* them to give bad work and materials. They maintain that they give honestly full value for the money they actually receive from purchasers; although they know well enough that the whole transaction is practically a mockery, for the articles are not what they pretend to be—they possess no true utility. “Cheap and nasty” is a well-known phrase, and by no means elegant withal in its terms; but it would be well if purchasers of furniture would bear in mind, oftener than many of them do, the lesson which it conveys. So also that of its paraphrase, as given in the other saying, “the dearest is cheapest.” At the same time, the contrast as between the makers of this modern so-called furniture, which furnishes the purchaser with what he finds but too soon to be a “delusion, a mockery and a snare,” and the makers of the old-fashioned furniture we have alluded to, conveys a lesson to us of some worth.

**The Influence of a Desire on the Part of the Public to have Cheap Work
on the Progress of the Art of Cabinet Making.**

The old honest workman could not if he would give bad work; and if he could would not in any wise have given it. But, in the high integrity of his character as a workman, with whom work in the highest sense of the term was a thing which had to be done in reality, not in fiction, he could do no other than give the very best workmanship of which he was capable. The rage for cheapness, if it existed then—which we have very good reason to believe it did not—did not affect him. To its claims, if ever they were presented to him, he would and did have but one reply: “I do not give you bad work, for bad work I cannot do, and would not if I could; if you cannot pay the price for it there is no more to be said—no money, no work. My work is of the best; it is worth your money. I offer only a fair exchange.” All such considerations, some of our readers may say, are purely moral and social, and have no practical concern with the subject in hand. We crave the pardon of such, if such amongst our readers there be—which, however, we take leave to doubt—for saying most explicitly that such considerations *do* affect

the subject in the closest possible manner. The morality of the trade, the *morale* of the workmen, constitute simply its vital principle. This principle and the merely mechanical work cannot be divorced : if a separation be made, it means only ruin to both ; and it will surely be admitted that the result of the execution of work depends for its value wholly upon the principle upon which the work is executed. The work done is surely influenced by the way of doing it ; and it will further be admitted that if the moral and social considerations were, as a rule, taken into account and followed out, the dissatisfaction which so widely exists between makers and purchasers would cease to exist. We may not always be capable of reaching to a high standard, but we are much more likely to reach it if we are convinced that it would be and is a good thing for us if we *could* reach it. To aim high is incumbent upon us all, and we should assuredly consider ourselves worthy of grave censure if we omitted to place before our pupil readers, be they youths or men of mature years, all the considerations which affect the highest interests of the callings which occupy the cares of their daily lives, and upon which their onward progress and true prosperity depend.

Utility in Furniture—How it may be Sacrificed.

We have said that utility is an essential point to be considered in the designing and construction of furniture—that is, that if it be not really useful and fitted to serve the purposes it professes to serve, it may, for all practical purposes, be left unmade. If the watch I buy does not go, or, if going after a fashion of its own, goes so badly that in place of guiding it misleads and betrays, I may as well save my money and refrain from purchasing it—unless I buy it for the mere look of the thing ; but at the best it is a make-believe, and I do not practically possess that which I seem, and only seem, to have. It reminds me of the Irishman who was put into a sedan chair which had no bottom : ostensibly carried, he had to carry himself—and, as he sagely remarked, “ Had it not been for the name of the thing I might as well have walked.” Better ! but for the reputation, such as it was—his engaged and confined walk could not have been of the most comfortable. One may well apply this grotesque story to the subject in hand, and ask how often one might as well not have articles in the house, but for the name of the thing, the reputation, or the look of the thing ?—for, in reality, they possess no utility. There are many households in which articles of furniture are put aside in some situation from which they cannot easily be taken out for use, simply because they are of “ no use,” for all purposes for which they are designed being utterly worthless ; they *may* be there

for ornament, but certainly not for use. This may arise, and does generally arise, from disgracefully bad workmanship and as disgracefully bad materials. But "utility" is often lost sight of in other ways—for utility, as we have seen, carries with it more points than one. The designer should always ask himself, in beginning his work—"What are the uses for which this article I am about to design, and afterwards to make, is really designed? what are the requirements of the user which it should meet? If I used it for myself, what qualities should I like it to possess? It is my duty to think of every possible contingency which may arise affecting its use." If this were done as a rule, the cases in which fitness and convenience are almost totally lost sight of would not be so numerous. Mistakes in design, errors in workmanship, in nine cases out of ten, arise from pure thoughtlessness.

**Practical Examples of Defective Design in Furniture Destroying or
Lessening its Usefulness.**

Articles are not only made so as to be inconvenient in handling, but uncomfortable when used. Some are made so as to be the cause of disagreeables; some positively possess dangers, from which more than one of our readers, we feel assured, have suffered. Articles of furniture, with which people in bustling about are apt to come in contact, are made with the sharpest edges at their corners, or with carved ornaments in such high relief that they yield sharp points, which are not only but too frequently catching objects of dress and tearing them, but are the occasion of many a severe bump or blow, which children, especially, suffer considerably from. We have seen an iron bedstead so designed and constructed that it was more than inconvenient—it was positively dangerous. In one example the whole of the ornaments were so designed that they afforded a forest, so to say, of projecting points, which were perpetually catching clothing; and we have seen a garment, perhaps but too hastily taken up, ripped up from end to end by catching one of these projecting points. Worse than this, we have seen examples of bedsteads so designed by way of ornament, and so constructed and finished, that projecting parts, having edges as sharp as knives, acted not seldom as dangerously. Conceive of such a *chevaux de frise* of cutting edges being placed within all too easy reach of a sleeper's head; an uneasy movement, which might occur at any moment during helpless sleep, might result in his cheek or hand being ripped up by an ugly wound inflicted by one of these sharp edges. We do not exaggerate: we remember seeing at an hotel a bedstead bandaged like a hospital patient, here and there with white linen neatly wrapped and tied

with coloured ribbon. We asked the reason, and were told that till it was replaced it was so treated to prevent a recurrence of a somewhat grave accident, which had happened to some hasty or unlucky inmate of the room, who had his hand most severely lacerated by one of those sharp cutting edges with which the thoughtless designer had adorned it by way of ornament, and which the equally thoughtless workman had sent out without all those projecting points being in some measure at least toned or blunted down. The same carelessness runs through nearly every department of furniture fittings, fixed or movable. How many fingers have been cut or hands chafed by that highly ingenious contrivance known as a window-blind rack!—although designer and workman would, if they thought at all about it, see that the hand must frequently, with every care, come down in contact with the rack in pulling up or letting down the blind. Yet the corners and edges are sometimes, if not always, made so sharp that they seem purposely designed to give the wounds they but too frequently cause. This point will be pooh-poohed by many. Yet they should remember that life's comfort is made up chiefly of a variety of little things. Each may be very trifling, considered singly, or as only operating for a brief, a very brief period; but as the periods in daily life are so often repeated, if it be disagreeable or painful, the aggregate of the repetitions makes the matter more than a passing nuisance or grievance.

Work to be Done should be done in the Best Possible Way—a Principle not easily Controverted, much Overlooked, however, in Practical Work.

But the principle, nevertheless, is overlooked or neglected in such cases—namely, that whenever work is to be done it should be done in the best and most complete way possible. If a thing is worth doing at all it is worth doing well. And well done work is that which is alone satisfactory. And so far from involving the greatest trouble, from a pretty long and a wide experience of work and of workmen, we firmly believe that of the two it is by far the easier to do good work than to do it in a half-hearted, perfunctory, wholly careless way. We know of nothing so demoralising—we use the term purposely, and in its widest and highest acceptation—as the influence of the notion that there are trifles in all work which may be safely, as they are but too frequently and easily overlooked. There is no such thing as a “trifle” in this sense, in any, no matter what be the kind of work done. If there be, then the whole is a trifle; for every work is made up of a number of details, and if any one detail be a trifle the whole are trifles. To those who believe in trifles the old saying should surely convey an important lesson—

"For lack of a nail the shoe was lost, for lack of a shoe the horse was lost, for lack of a horse the rider was lost." Truly a trifle was the nail when weighed against or compared with the value of the life of the horseman; yet the value of the nail was neither more nor less than the measure of the value of the rider,—without the nail the man was lost. It will be a great day for the future of our industries when the opinion is held universally by all engaged in their daily practice that there is not the slightest detail in work which is a trifle and which can with safety be neglected.

The Habit of Thinking Over and Out of Work to be designed and done by the Cabinet Maker essential to his Success.—Practical Examples.

The habit of thinking out a piece of work, so as thoroughly to comprehend what it is done for, and what are the widest and highest uses which it can serve, cannot be too frequently and too forcibly inculcated. Nor can its importance essential to the welfare of the workman be overestimated. If thought were given to every piece of work we should not see so much of it ministering but very slightly to the end that it professes to serve—in some instances ministering to an end the very opposite, indeed, to that which was its legitimate use. We purpose at this point to show somewhat fully the value of the habit of thinking out and over the purposes which articles of furniture are designed to fulfil, taking as the basis of our remarks two classes of chairs. We would here note that we do not deem it necessary for the purposes of our work to enter into a like criticism of other parts of furniture. Our object here—which, of course, is involved in the discussion, while giving hints as to the designing of chairs—is specially to lead the youthful cabinet maker to an appreciation of the value of the habit of thinking out all his work, analysing it, so to say; and further, by what we give, to show him the best way to direct his thoughts. Our purpose will be amply fulfilled if we can persuade any one reader to think for himself, not to be guided and influenced by what others do, regardless of whether it be well or ill done. In such matters one is responsible for his own work—no one else can answer for its doing. Take, for example, a *chair*. What is the essential element of this article of furniture—the reason for its existence? Obviously it is that which ministers to rest or repose; it may minister merely to convenience, as in sitting at a table while taking refreshment, yet even then it is impossible to separate the idea of rest, at least repose, from it. But, as we say, the primary or essential reason for its existence is repose to burdened brain, rest for wearied and exhausted body. Do all chairs give this feeling of rest and repose? Let hundreds answer

who have known, who know daily now, how far they are from obtaining either one or the other truly by sitting in a chair. To a certain extent all chairs may be said to give rest and repose, but to be useful both must be complete. As chairs are almost universally made, we have no hesitation in saying that they cannot give completely or fully that species of rest which when even well designed they are calculated only to give. For a chair, rest or repose is, we do not forget, different in character from that of a sofa, in which a reclining, or a bed, in which a prone or prostrate condition of the body, is the characteristic. But so far as it goes, the rest or repose of a chair is most desirable and necessary for wearied body. We have said that all chairs give, however faultily designed, some degree of rest and repose. But this is not so; for there are some so constructed that they positively give no rest, compel the sitter to be in anything but a condition of repose. Of this type and of all its harm the reader may remember a graphic illustration in Dickens's novel of "The Old Curiosity Shop." The scene is *the* shop—the actors Quilp the dwarf, Brass the oily solicitor, and Quilp's boy, a lad of a kindred genus. Quilp, ever thinking how to make those with whom he came in contact as wretched and miserable as he could, was eminently desirous on this occasion to minister to the comfort—in his idea of it—of Brass the solicitor, for whom he had a personal contempt, although he used him for his nefarious purposes. The "happy thought" struck him of making Brass be seated on an old-fashioned, high, straight-backed chair, the seat of which was anything but straight, sloping very considerably forward. The horrors of the situation—the rest which was no true rest, the seat which gave no real sitting—aggravated tenfold by those of tobacco sickness, Brass being urged with fiendish glee by the dwarf to keep on smoking, although merely incidentally, are most graphically, described by the novelist.

[Some Notes on the "Philosophy" of Furniture Designing.]

What does this incident teach the pupil in cabinet making as to what may be called the philosophy of the design of a chair? It seems a simple thing to make; only something upon which one can sit down. But as it is not mere sitting, but the something which follows, or should follow, this act—that is the point to be considered. This something is, as we have seen, rest and repose. So that to design a chair which will truly give rest is not quite the simple thing it seems at first sight to be. If the pupil will set himself to think over the points involved, he will quickly discover that there are several considerations to be taken into account before the problem

can be satisfactorily solved. In the first place he will see that there can be no true rest, no repose to wearied limbs, if any strain is thrown upon them. The muscles must be allowed to relax, if the limbs are to get rested. If, for example, merely to keep himself on the seat, he has to plant his feet on the floor so as to get a point of resistance from which to exert pressure through the medium of his legs, there is a strain thrown upon them which is directly antagonistic to rest and repose. This will be the result if, like the penitential chair of Brass the solicitor, the seat slopes forward. If it slopes considerably, the muscles are being constantly exerted to prevent him sliding forward and off it. If the slope be but trifling, the sitter may not be conscious of making any exertion to keep himself from sliding off it; but he makes the exertion nevertheless, and making it, feels in proportion that his limbs have not been rested. In such a case, likely as not, he rises with the exclamation that he would not have felt half so fatigued had he been standing or walking. There has been a strain on the limbs which in one sense was unnatural, at least unusual; and he feels the fatigue to be all the more on account of it. Although in a much less degree, the same result happens if the seat be perfectly level. Moreover, it is to be noted that by the way in which the chair is upholstered all the effect of a seat sloping forward may be given. Men never do anything without a reason; they may not be conscious of reasoning at all, still they do it intuitively, and a reason they have. When men sitting in a chair fling themselves back and tilt the chair backwards, what is the reason why they do this? Ladies say it is done "because men are so awkward," or "because they are so vulgar." If men who did this were asked to analyse the reason why they were so "awkward," they would soon see the true position of the matter, that they could with safety declare that the awkwardness lay in the chair, not in their action of tilting it back. If they were to get rest and repose at all for their limbs, they felt intuitively that they must obviate the awkwardness of make of the chair by the awkwardness so called of the backward tilt. They felt a strain more or less severe on their limbs when sitting on the chair in its normal position as designed by its maker. They felt this strain to be relieved by putting it in a position never designed by him that it should occupy. Let the pupil cut say half an inch—or better, three-quarters—from off each hind-leg of a chair, keeping the remainder in the way that he has bought them; let him, some evening when he is thoroughly jaded, and finds his legs so that, as the saying is, "he does not know what to do with them," seat himself in one of the ordinary chairs; and then, after some time of sitting, let him betake himself to his "doc-

tored" or amputated chair. Then let him honestly say in which of the two he felt that he derived the greatest comfort of rest and repose. Those who have designed the seats of our second and third class railway carriages of recent introduction have had an idea of such facts as we have named; for they all slope considerably backwards, to the great additional comfort of the passengers, nine-tenths of whom, we undertake to say, could not explain the reason why they were so comfortable; or, if they guessed that it was owing to the sloping seat, higher in front than in back, would not be able to explain why it so acted.

Further Practical Points on the Designing of Furniture.—Thinking out of the Purpose it has to serve—or its Utility.

Take again, the case of easy chairs. So called!—for many are so made that they are by no means easy to sit on, or rather in. We say "in," for the idea which dominates the design of an easy chair is that of an enclosing space, within which space one sits to be thoroughly comfortable, shielded at the back and sides from those draughts and cold currents which are so prevalent in even our best ventilated rooms, and in which one can lounge and be thoroughly at rest. The very same principle which dictates the position of the seat of an ordinary chair, and which we have endeavoured to explain above, applies to an easy chair,—only with just so much the greater force inasmuch as, while an ordinary chair is not always used for the purpose of obtaining rest, being often employed chiefly for convenience, as when sitting at table, an easy chair is really designed for rest and repose, and for nothing else. Its very size and weight preclude it from being moved about from place to place conveniently. It is therefore, as a rule, kept in one place—generally at some cosy corner of the room—near the fireplace, round which Englishmen love to cluster. With the easy chair, therefore, the idea of rest and repose is invariably associated; but it is not always so well designed that either one or the other can be obtained by its use. This arises from either a positive ignorance on the part of the designer, or from carelessness in applying his knowledge, if he possess it, of what are the true physiological facts which dictate what rest in one sitting or lounging is. Whether the cause of bad design be the one or the other of those named, ignorance or indifference, the practical result is the same—bad work. We have shown that all strain thrown upon the limbs is antagonistic to rest of the body. The seat, therefore, should be such as that strain is taken off the limbs; and this will be greatly effected by giving the seat a backward inclination. This should primarily be done by adjusting the relative length of

the front and back legs, but it should also be secured by the method in which the chair is upholstered. Too many easy chairs—we might say nearly all—are so upholstered that the front part of the seat presents the aspect of a little hill with very steep side sloping to the front. So that if one sits down, feeling an inevitable tendency to slide down or off the seat, a strain is thrown upon his legs to prevent the catastrophe of a descent to the floor. A little thought on the part of the upholsterer would obviate this unpleasant position, and would give a seat so made that on sitting down there would be a sense of repose in the mere stability, so to say, of the part sat down, so that the position once taken, one would intuitively feel that it could be retained without any physical exertion. The sense of uncertainty, the feeling that one will sooner or later have to move in order to adjust oneself to the seat, are thoroughly antagonistic to perfect rest and repose. There can be no true repose where there is movement or a desire to move.

The exercise of a little thought would obviate, we have said, any such inconvenience; but the misfortune of the matter is that this thought, however little of it may be required, is not always, not often, given. Its exercise is neglected but too completely and too frequently in other points connected with easy-chair design. We have said that one characteristic of this piece of furniture is its having roomy space in which to lounge. But is this space always given with judgment? Enough is only required, but if too much be given the attribute of cosy shelter is lost in proportion to the excess. What, then, in practice do we too often find? A breadth of seat or width of space between the enclosing sides calculated apparently with the notion that two people are to sit upon it in place of one. This excessive width adds unnecessarily to the dimensions, and therefore to the weight, and of course to the costliness of the chair; and it is subversive of true comfort, which requires ample space only for easy movement of the body, but not wide vacuities which the body only of a giant would fill up.

The Value of Thought given to the Designs of the Cabinet Maker, further and practically Exemplified.

But if the width or breadth of easy chairs be excessive, what is to be said of the depth—that is, the length of the seat from front to back? We have seen that to get the repose which an easy or any other form of chair should give when one sits down for the purpose of obtaining rest, all strain should be taken off the legs, which is best done by giving the seat a backward tilt or slope. To gain repose, the back of the individual must also be supported. For to

sit bolt upright in a chair, however otherwise well designed to give rest to the legs, would scarcely be looked upon as rest or repose by a wearied man. Back support is therefore necessary; and this, while upholstered so as to be soft and yielding, should be so adjusted in its backward angle or slope as to be in harmony with the angle or slope we have seen to be essential for rest on the seat of the chair. But no matter how well designed the position of, or how comfortably upholstered, the back of the easy chair may be, what if the back cannot be reached without bringing into operation certain strains upon the limbs which it is the very object of the designer of the easy chair to prevent? We say, "if the back cannot be thus easily reached." That it is a difficulty so to reach it, and yet to keep the body easy, in many instances of easy chairs, requires but a little observation to see clearly. The depth from front to back is so excessive in many easy chairs, that when the support for the back, which we have seen to be so desirable, is wished for, and the sitter sits well back to get it, what is the result? In nine cases out of ten, taking the average height of men and the length of their legs, if the back of the sitter be leaning against the back of the chair, his legs are so drawn up that we have seen little men so sitting have them absolutely horizontal, their feet projecting outwards, and but a little way, moreover, from the front, so preposterously long was the seat of the chair from front to back. With men not absolutely little, but still not tall, their legs, though hanging down, still fall short of the floor; and even in the case of ordinarily tall men, such is the length of the seat that, when sitting fully back in it, their feet do not get a proper hold of the floor, so that a certain strain is thrown upon the limbs. To gain all the rest which such easy chairs with preposterously long or deep seats from front to back can afford, one would require to be a giant of seven to eight feet in height.

But while rest for the back and freedom from all strain upon the legs are requisite in a chair deserving of the name of "easy," rest also for the head is necessary. To a wearied man, worn out with work of brain or body, or to one desirous to take "forty winks" before or after dinner, it is a matter of no small disappointment to find, on throwing back his head, that it falls, not upon a comfortable and firm resting-place, but upon the vacuity of space. Or if, to avail himself of the back of the chair so as to find a resting-place for his head, he finds that this can only be got at the risk of losing his seat; for he has to throw himself so far forward that he is very nearly pushed off the seat altogether, and a strain is thus thrown upon his limbs. There must be but few of our readers who have attained mature years, very few indeed of those past middle life, who have

not had experience of this kind. In an easy chair, thoroughly deserving of the name, and capable to give rest to the whole of a man's wearied frame, limbs, body and head, for which alone it is designed, provision is required for the rest of the head. The back should therefore be high, at least in the central part, to afford support for the head; and the designer should endeavour to arrange this part of the construction so that it will be a comfortable resting-place. What notion of the true office of this part of easy-chair construction can a designer have when he terminates the back of it with some bold projecting carved work, such as we have seen in easy chairs? Even a hard-headed man would object to resting the back of his head on such a knobby or knotty surface.

That the form of the back, or rather the outline of the upper part or edge of it, should be considered, is, we think, clear enough; but it is not always, we may say with truth seldom so. What is the condition necessary to be observed? Obviously, rest or repose for the head. How can that be secured if the wearied man who is trying to get "forty winks" is perpetually waking up at short intervals to bring up his head to the proper central point, which he wakes up to find sliding away down the steep and smooth sides of the convex curved outline or moulding at the back? It is obvious that if the central part of the chair back and top be rounded—that is, if the back moulding be formed of a part of a circle or a curved line, placed so as to give a convex surface, there can be no real resting place for the head. An effort will always be required to keep it at the highest part of the curve, where stability alone can be secured. Take, now, a back so formed that the central part will be a concave. This will naturally form a hollow part into which the head will fall; and if this concave part be proportioned to meet the average size of head, it will be so supported on either side as to give a real resting place to the head during the process of taking "forty winks."

In taking up the inquiry into the design and construction of chairs, which we have now concluded, we warned the reader not to expect a like criticism on the design of other parts of furniture. Nor do we deem this necessary; for at the same time we pointed out that our chief aim in entering upon the inquiry was to show the young technical worker in and designer of furniture to think out all the objects which each article was designed to serve, or which they should serve. This exercise of thought we deem to be of the utmost importance, for upon it rests absolutely the hope and the work of the future. For when thought is given by the bulk of the trade we shall find that all the anomalies and "practical absurdities and inutilities"

—to quote the words of an authority on the subject—at present existing in the furniture of our houses will cease to exist, or at least be very greatly modified and largely done away with. It is, however, not only necessary to have a desire to think over all the details of one's calling; it is equally necessary so to think that the best results of thought will be obtainable. There are, be it remembered by the youthful technicalist, thinking *and* thinking: that is, thought well directed, logically used, and thought which is so ill directed and so objectless that it is practically little better than dreaming, or castle-building in the air. Thought, to be worth anything, must be patiently, and, as may be expressed, tautological as the term may be, thoughtfully thought out. In work like that we have been considering, the faculty of analysis—of “pulling a thing to pieces,” “turning it inside out”—is most valuable. We have endeavoured, in the inquiry into chairs, to illustrate how this may be done in the case of every object which the young cabinet maker is called upon to design and construct.

Utility the Primary Essential of all Furniture.—Relation of this to Ornament or Beauty of Form.

We have seen from what was stated in the preceding paragraphs that the primary essential of all articles of furniture is that they be useful. If they do not in the most complete economical and most convenient way fulfil the object or purpose which is the very reason of their existence, the purpose for which they are made, we have said that for all practical purposes they might as well have no existence—need not, indeed, be made at all. Although self-evident, and requiring no argument to prove its accuracy, this position is, as we have seen, not seldom forgotten or overlooked, and in proportion as it is, so do we find grievous errors in design committed, serious mistakes in construction made.

But although an article of furniture may be—must, if it is to be practically worth anything at all, be—useful, it does not follow that it should be ugly or unpleasing to the eye. On the contrary, true utility can be made to lend itself admirably to the attainment of beauty or of eye-pleasing effect. And we have endeavoured in a preceding paragraph to point out that it is the duty of the designer to give to his articles of furniture this attribute of beauty or of pleasing effect. We have, then, first an article well constructed; we have now to consider how it can be correctly ornamented. For it is by the addition of what we call “ornament” to a constructed article that we make it to be what is termed “beautiful.”

Ornament can be given, as we have already hinted at, to articles

of furniture in two ways, used either independently of each other or together. The first is "form," the second "colour." Form may be given by the mere shape or configuration of the object or of its component parts; and this form may keep the surface of the material used quite smooth or uniform. Or an added beauty or ornament may be given to the object having a pleasing form or shape by providing curved or moulded work. All work of this kind must, however, be subservient to and kept closely within the range of the utility of the article. That must never be interfered with. And all added or external-surfaced ornament which destroys or impairs the usefulness of the article may at once be pronounced as false, and worthy, therefore, of being at once and utterly condemned. "Ornament," says an able authority, while discussing the subject of furniture—"ornament is merely the decoration of a thing constructed. Ornament is thus necessarily limited, for, so defined, it cannot be otherwise than secondary, and must not usurp a principal place; if it do so, the object is no longer a work ornamented, but is degraded into a mere ornament." The pupil should be careful to note the very important distinction here made. At first sight he may conclude that the authority here quoted is stating what appears to be tautological, if not quite paradoxical, for a work ornamented does appear to be an ornament. But to see that it is not so a little consideration only is required to be given to the point in connection with what has been previously said. For there are some objects which perform no other office than that of decoration—that is, are purely ornamental. They propose to minister to no directly useful object; they are there merely to please the eye by the beauty of their form, outline, shape or configuration, or by such decoration as may be superadded to this form. They are therefore purely ornament. But if a piece of work expressly constructed with a view to its utility—that is, a constructed work with a precisely defined use for it—is made pleasing to the eye by decoration obtained either by the mere form, outline, or shape, or by something added to this, then the article is said to be ornamented; but is not, as we thus see, merely an ornament. Decoration, then, as our authority puts it, if not secondary or subservient to the usefulness of the article, simply, as he says, degenerates it into a mere ornament, which, wisely or otherwise, is merely kept "for show." Hence it is incumbent upon the furniture designer that he should bear always in mind the essential character of the article, inasmuch as its primary object—its *raison d'être*—is to serve some purpose of utility. It might as well have never been made, if it cannot serve the purpose for which it was thought of or designed. And in proportion as this object of

its existence is lost sight of, so in like proportion is its value as a useful article lessened. Ornament may add to its value, as making it pleasing to the eye, but it cannot either add to or detract from its usefulness. But even if ornament be given, thus to bestow upon it an added value, it must be subservient to the main object of the article—utility; and above all things it is essential that added ornament should bring into relief—not subdue or hide it—what is the peculiar character of the work or object which the constructed article is to perform: to make the reason for its construction more obvious, and assuredly not to conceal or disguise the material used in it. As a rule, it may be safely asserted that the more closely the decoration adopted is connected with and brings into notice or is in harmony with the purpose for which the article is made, the higher the standard which the designer has reached. The purpose should, therefore, decide the character of the form; and it is more by form, outline, shape or configuration, than by added or surface ornament, such as carving, that furniture can be made to be what is called well designed. All added ornament—or as it is technically called enrichment—should be, as we have said, subdued in character, and if not well designed the articles are assuredly better for its entire absence. A great deal of expense is incurred by some cabinet makers in executing carved work which is in no sense worth the labour bestowed upon it or the money it costs the purchaser. In such cases it is worse than money thrown away. For it not seldom happens that in addition to being ugly—that is, designed on false principles of ornamentation—it is always inconveniently placed and often absolutely dangerous. It is so placed on certain parts of furniture that it interferes with the easy handling or removal of them, or it catches dresses, causes contusion to hands or arms coming in contact with it, or harbours dust or dirt not easily got rid of. Even the ornament which is added to form, which is of such a comparatively simple character as mouldings, should be subdued, and always treated strictly in accordance with the object or purpose of utility for which the article is made. Thus, in fixed furniture—as wardrobes or cabinets—the mouldings at those parts out of reach of dresses or parts of the body likely to come in contact with it may possess the feature of projection—as at the cornice—in higher degree than at the lower parts. The projection should be given only in so far as is absolutely necessary to keep up the character of the moulding; but all sharp edges or corners must be rigidly excluded, inasmuch as they militate against utility. We have seen the drawers of a small clothes cabinet in a bedroom suite ornamented with a moulding running round the front of each drawer—not only projecting so much, but what was

worse, so sharp in the outline that it was positive pain to aid the closing of the drawers by pressing against them with the knee—a method of closing a drawer almost intuitively adopted when it is heavily filled or difficult otherwise to close. So also we have seen a wardrobe the panels and other parts of which were decorated or burdened rather with carved work so pronounced and with such elaborate undercutting that dresses were being perpetually caught by it as they would have scarcely been less effectually taken hold of in passing through a forest of brambles or thorns; while, what was worse for peace and quietness of the family, the children's hands and sometimes heads were none the better for their rough-and-ready contact with the ornaments. The same necessity to think exists in the matter of design in decoration as we have tried to show exists in that of construction. The pupil, in considering decoration, must always bear in mind what the article is to be used for which he intends to decorate. Greater scope in the employment of added ornament in the form of mouldings and carvings is obviously given in the case of articles of fixed furniture than in those which have often to be moved about, or are liable to frequent readjustment as to position. And in both classes of furniture it will be found that more striking and more artistically correct effects will be obtained through form, outline, or shape, than by added ornament, especially that of carved work. The most elegant or, we should rather say, the most beautiful furniture we ever saw was that in which there was almost a total absence of carved work,—mouldings only, and those of a very subdued character, being employed, and even those sparingly, the whole effect being obtained by the purity of the forms, outlines, and shape of the articles. And this was so subordinated to the object or utility of the article, that its particular character, so to say, was kept quite evident. There was a fitness, in fact, of the design to the use, and also to the material employed. Much, no doubt, of the general effect was obtained by the upholstery of those articles which required this class of work; but here, again, the way in which the materials were employed, and the very character of the material, showed clearly that the designer throughout had "fitness" always in view in arranging his work. There was in everything the evidence of a unity of purpose which gave a unity in design and useful effect, which in turn gave a strikingly satisfactory character to the whole suite.

Application of the Term Furniture.

We have said that the term furniture is much less constricted than many suppose it to be. In its more extended and, as we may

say, practical sense, it involves something more than chairs, tables, sideboards, sofas, and the like—to which by many the term furniture is so considered alone applicable, that when they speak of the “furnishing” of a room, they consider that to be completed when such articles as we have named are supplied to it. Taking our rooms as they are, we find that their look, appearance, or “effect,” as the phrase goes, is dependent upon several things in addition to the movable or portable articles we have named. It would, in view of this fact, perhaps be as well if to those articles the term “furniture” was confined, while that of “furnishing” of a room would have that more comprehensive meaning and application which would include not only the movable and portable articles—to be termed, as we have said, furniture—but the fixed and permanent features of the room, as the fixtures of doors and windows, of grates or chimney-pieces, plasterers’—or, what is called oddly enough, decorators’—work, such as cornices, ceiling centrepieces, and the like, curtains and hangings, wall papers or wall surface painting, or panelled decoration, and we might also include as a fixed or permanent feature of this “furnishing” of a room, the carpets with which the floor is generally covered. When partially carpeted, and the floor surface therefore partly yet permanently exposed, if the floor were treated ornamentally with inlaid work, then this would consistently form part of the fixed or permanent work of the room furnishing.

This series of volumes concerns itself almost exclusively with the subject of cabinet making, which is by all admitted to be the work of making those movable or portable articles of “furnishing” to which the term “furniture” is popularly alone applied. Still it would render it more complete to the cabinet maker if we glanced very briefly at the leading characteristics of those departments of general furnishing of rooms which we have just named. The cabinet maker strictly so called is very frequently called upon to exercise what is called his “taste” in providing and fitting up what completes the “furnishing” of a room,—such as wall papers and the like,—and it would be useful for the pupil reader to have before him some at least of the principles upon which “correct taste” in those departments is based. Space scarcely admits, however, of our more than merely referring to this subject; but much of the matter given in the volumes in which artistic subjects are considered more or less directly, such as those under the head of “The Ornamental Draughtsman,” “The Ornamental Worker in Wood, Stone, and Metals,” will be applicable to the subjects now to be glanced at. To these volumes, therefore, the attention of the pupil is directed. What we have further to give in connection with it will be chiefly on the question of—

Colour in Relation to Ornamental Furniture and Furnishings.

It will be well at this stage of our remarks to note that ornamental effect in these departments is largely dependent upon colour. We have said that, in connection with articles of movable or portable furniture, ornament is obtained by form, outline, or shape, chiefly, with some added decoration judiciously applied, but that colour also is available. This, we need scarcely say, has been but little used in the practice of cabinet makers during the past few generations. In generations long since gone by, when furniture *was* furniture, and received the attention even of the first artists of the day, colour was very largely employed in the decorating of various pieces, and the effects were striking and beautiful. Some specimens have been handed down to us; and met chiefly with on the Continent; they serve to show us what a power our room furnishers have neglected for so long, capable of adding enormously to the pleasure derived from having beautiful objects surrounding us in the places where we habitually live. It is gratifying to know that this love of colour is again manifesting itself amongst our cabinet makers—it being used, however, chiefly, if not almost exclusively, for bedroom furniture. For these light woods are now largely used, and such varieties known as “silver fir,” “maple,” beech wood, and the lighter qualities of bay wood, lend themselves with singular adaptability to the purposes of colour. This is in the more expensive articles obtained by inlaid or Buhl work—the latter so called from the name of the introducer of this class of work, who was the upholsterer to the great French king Louis XIV. But colour may be applied with good effect, and at a moderate cost, in the usual way to the surface by simple painting. It is necessary, however, to obtain due artistic effect, that not only the colour be appropriate to the wood, but the design or form of the ornament judiciously considered. One practice can scarcely ever be altogether wrong—that is, where the ornament used is flat. To attempt the round, as if curving were imitated, is almost always productive of false and meretricious effect. And the colour should always be of one tint, and this dark.

In the general furnishing of rooms colour is much more lavishly employed than even in the articles of furniture to which it is applicable. Indeed, in these last colour should be very sparingly used, always kept well subordinated to the general extent of surface decorated. In panel work, for example, it should be almost confined to the corners, and this even over a small extent of surface—a thin line, either plain or ornamental, joining those along sides and ends. Some very beautiful effects may be, however, obtained by judiciously designed centrepieces, and by surrounding the handle or keyhole

with a well-designed ornament. We have yet to learn how to use metal work for the purposes of furniture decoration. It is only very recently that even an approach to its use has been attempted, and we are very far from having reached a point of what may be called only comparative perfection.

Colour in Room Decoration in Relation to Furniture and Furnishings.

In the general furnishing of rooms, especially in wall decoration, colour, as we have said, is extensively used. It would be well if it could be said that it has been as a rule judiciously, that is, artistically, employed. But so profusely has it been given, and generally in such direct contradiction to all artistic rules, that those possessed of more correct because more cultivated taste have got disgusted with it, and many have run into the opposite extreme, and are very chary indeed of having colour applied to the decoration of their rooms. But those who so act, and those who are inclined to follow their example even to the complete exclusion of colour, should bear in mind that there is artistically no objection to the use, even the lavish use, of colour: this only is the point which, in such employment of it, must be attended to in order to meet artistic requirements,—namely, that the colours be harmonious. Harmony in colour is as pleasing to the organs of sight as harmony of musical sounds is pleasing to that of hearing. We do not here stop to inquire what constitutes this harmony in colour: the point has elsewhere been illustrated and enforced in the series of volumes entitled “Form and Colour in Industrial Decoration,” to which therefore the pupil reader is referred.

Details of Furnishing.—General Principles affecting the Design.—Carpets.

Having thus glanced at one of the points affecting general furnishing of rooms obtaining effects through media apart from the objects of ordinary furniture, we can only find space to illustrate what has been said by a brief reference to the important department of carpets. Much of what will here be given will, however, apply to other sections, as wall-papers, curtains, etc. The manufacturers of Europe were in modern times, for the first time perhaps, taught some extremely useful lessons by the gathering together of the nations at the Great Exhibition in 1851. The almost universal notions which prevailed concerning the superiority of European design over Asiatic received a rude shock, and it was with something of stupid surprise that we compared the productions of the “semi-barbarians” of India, Persia, and Turkey with the fabrics from Gobelins, Brussels, and Kidderminster. For in no department were we distanced more completely by the Easterns than in this of carpets. So entire, indeed,

was the defeat, that the jurors of Class XIX. seem to have been positively astonished by the result of their investigations. The fine fitness of design, the beauty of texture, the softness and harmony of colouring visible in the Eastern carpets, were so indubitably superior to the miserable decorations of the English and French designers, that for some time after the Exhibition of 1851 we were deluged both in Paris and London with exact imitations of these semi-barbarian productions. Designers and manufacturers were running wild after Asiatic patterns, and both on our walls and floors we were exhibiting practically our conversion from the false notions which had obtained so generally before. Indian and Tunisian carpets were the rage, just as Persian carpets or rugs are the rage now, and the East was revenged upon us for our long defamation of its merits in decoration.

The rage did not, however, last long. Through some cause or other the public became tired of these Eastern goods. It was found that the hues employed in the colouring of them were altogether too negative, too cold. They were excellently well fitted for an Eastern climate, where the main desire of the eye was for something cool and low in tone. But for France or England they were not suited. Here we want something warmer and more florid, as contrasts to the want of colour and of heat outside our homes. And so these Indian, Persian, and Turkish goods went out of fashion. The influence, however, of the correct principles upon which they were designed has been felt ever since, and our carpets are now free to a great extent from those barbarous violations of correct taste which were so plainly manifested in the productions of the European looms exhibited in 1851. It is right to mention, however, that the demand for Eastern carpets has again sprung up in recent times, and it is still said that most extravagant prices are paid for real specimens, or what are said to be real. This has arisen through the new æsthetic rage or craze which has of late set in, and which, dominating so large a section of the community, has brought about some results which cannot be regarded with true artistic complacency—so flagrantly against all true artistic taste do some of the manifestations of this æsthetic craze rebel. We owe much of this untoward result to that unfortunate notion of some architects that the domestic architecture of the nineteenth century can be represented by borrowing a style—that of the so-called Queen Anne (if, indeed, it were deserving of the name)—which all true artists had agreed, and still agree, to denounce as one of the lowest forms of art. The “rage” has extended to the furniture of our homes, and created a demand for furniture of this period referred to; and work is highly esteemed

which was made by Chippendale, who has been termed the "upholsterer of the dark ages of art."

"The surface of a carpet, serving as a ground to support all objects, should be quiet and negative, without strong contrast of either form or colour. The leading forms should be so composed as to distribute the pattern over the whole floor, not pronounced either in the direction of breadth or length. The decorative forms should be flat, without shadow or relief, whether derived from ornament or direct from flowers or foliage. In colour the general ground should be negative, low in tone, and inclining to the tertiary hues; the leading forms of the pattern being expressed by the darker secondaries, and the primary colours or white, if used at all, should be only in small quantities, to enhance the tertiary hues, and to express the geometrical bases that rule the distribution of the forms. The laws regulating the harmonies and contrasts of colour should be attended to."

Those remarks are chiefly criticisms of the class of work shown in the two Great Exhibitions held in this country, but which, while they are taken as indicative largely of the work of the past—for great improvement, as we have seen, has been made of late years—apply, and perhaps even more forcibly now than they did then, to work of the present, of which it is scarcely necessary to say that there is but too great a supply to be met with in the warehouses of some dealers and makers. The canons or rules of design apply at all times; and what these are have already been noticed, or will be so in the remarks we are about to give.

The sins against correct principles of design in this department arise chiefly from a want of attention to the second fundamental canon—"ornament should arise out of and be subservient to construction." The vagaries of designers of domestic and other furniture, as instanced in the Exhibitions of 1851 and 1862, were something to wonder at. It is admitted on all hands that both in 1851 and 1862 the English manufacturers well sustained their character for solid, stable, reliable workmanship, which has ever been the distinguishing feature of British work in this department. What they exhibited was well made. That passion for *good* things—which Emerson says is a special English characteristic—was abundantly gratified by the honest workmanship visible in all the furniture shown by our countrymen. It is likewise undisputed that the splendid carving and generally exquisite finish of the French productions fully sustained the high character which our neighbours have long borne in relation to their efforts in the department under consideration. Indeed, this was the case with everything they exhibited. And yet it was impossible to keep a serious countenance

when looking at some of the goods which they exhibited in 1851. On the surface of a carpet, for example, amorini, thrown into highest relief, were sporting under the shade of forest trees, through the centre of which, between the branches, there was a large opening representing a wide expanse of sky! And this was actually intended as a surface to be trodden under foot! We were to crush amorini!—to trample down forest leaves and clouds! The design was preposterous—the very height of absurdity. But the brilliant qualities of the workmanship, the harmony of the colouring, the fine drawing, and the excellent texture of the material, called forth the highest admiration, and redeemed the carpet from unqualified censure. Good workmanship is an evil when employed upon a bad design, for it tends to foster and perpetuate the evils which the bad design originated. The exquisite carving of bulrushes bristling round a piano leg, in a situation where they are sure to be broken off, is to be deprecated by all means. If we could marry the bad to the bad in this case, we should soon have both parents and offspring condemned to death. It was everywhere admitted, we say, that in the Exhibition of 1851 the English and the French sustained their characters—the former for good and the latter for brilliant workmanship. But it was likewise perceived by persons of correct taste that the great majority of the furniture designs were poor, many of them execrable, some of them bad to the last degree. Construction was disregarded, and almost everywhere ornament was in excess. The decoration did not, except in a small minority of cases, arise out of the constructive forms, but was evidently the chief object of the designer's attention. The natural order of things was reversed, and the rule was to construct decoration. Bookcases, chairs, and sideboards of most preposterous designs were exhibited, and a general feeling of disappointment among the judges of correct design was the result of an examination of the works in this department.

As we have intimated, however, there were some fine exceptions to the prevailing errors. The correct "idea" of the object seems now and then to have been perceived by the designer. Constructive truth distinguished some of the productions exhibited; the ornamentation was found in some cases to be natural, and the quantity of it well calculated. These remarks may be fairly applied to the sideboard exhibited in 1851 in the French court by Fourdinois, which we engrave. Concerning this sideboard the jurors of Class XXV. reported as follows, and we may remark that the observations embody perfectly our own impressions of this splendid work:—

"This piece of furniture is of rare excellence and merit in design, and of skilful and artistic execution as to carving, and although of

a highly decorative character, is fitted for the purpose for which it is intended. Six dogs, emblematic of the chase, resting on a floor of inlaid wood, support the slab, which has a simple carved moulding along its front, and is inlaid in geometric forms. The dogs are not merely imitative, but are treated as a part of an ornamented bracket or console, thus composed architecturally for bearing and support. Above the slab, standing on four pedestals, are female figures, gracefully designed as emblems of the four quarters of the world, each bearing the most useful productions of their climate as contributions to the feast. Thus Europe has wine, Asia tea, Africa coffee, and America the sugar-cane. In the central space between the pedestals, which is rather the widest of the three, the products of the chase are poured out on the very board, and above this the space is filled with a framed picture of rare fruits, giving an opportunity to enliven the work by the addition of colour without militating against good taste; above the figures, which are treated as statues, the cornice is bracketed, and supports boys with the implements of the vineyard and of agriculture. It rises into a pediment in the centre; this is broken in the manner of the Renaissance, and decorated with a figure of Plenty crowning the group. The upright line of the back is gracefully varied at the sides, and constructively strengthened by carved brackets, above which are terminal figures bearing the implements of fishery on the one side and of the chase on the other. The panels of the pedestals, and of the side compartments below, are filled with carvings formed of the fruits of various countries, grouped with the instruments of horticulture and agriculture. Two brackets on the side compartments between the figures give an opportunity for placing silver plate in a position for display. The ornamental parts of this piece of furniture are carved throughout in a masterly manner, and in a bold and free style; it is consistent as a whole, and free from puerilities; and while it is thoroughly fitted for its purpose as a sideboard, it is at the same time of a highly ornamental character, without any of its decoration being overdone or thrown away. It corresponds in its constructive form with the Renaissance of the fifteenth century,—in the style of its carvings rather with the works of the thirteenth, the gates of Ghiberti having evidently supplied the idea of the groups of fruit and implements which fill the panels; and it may be remarked as a fault that it has been overlooked that the relief in Ghiberti's work was suited to metal, the ornament standing beyond the face of the framing of the panel; but in adapting it to wood this should have been modified so as to bring the impost of the carving within the surface; such faults, however, are trifling in a work otherwise of

great ability. The care which has been taken to keep all the ornamental details in the same scale throughout is an additional merit, and the wood has been judiciously chosen as to colour and grain."

Principles of Design applied to Wall Colouring.

Dark colours absorb light, and give the effect which many complain of, but which few comparatively can explain the reason of,—still more confined space than the room actually possesses. How frequently, when a dark, gloomy, light-absorbing wall-paper has been replaced by a light one, and this more by chance circumstances than from any definite idea of bringing about the change because it would be better, has the remark been made, "How much larger the room looks!" People wisely say "looks," for they of course know that its dimensions are unchanged. And yet this "look" is a positive gain, for the idea of increased in what before always looked such a straitened space, is in large measure equivalent to the actual obtaining of wider room. Nor must the effect of a lightly coloured room be considered only in this or in its artistic aspect. The physical effects, or rather the physiological influences, must not be overlooked. And they are operative to a large degree in influencing favourably the conditions of healthy and—in a physical sense—enjoyable life. There is now a universal consensus of opinion amongst physiologists in favour of light as influencing for good the healthy continuance of animal life. The value of light—and the more this approaches to a full supply of direct sunlight the higher this value is—was long ignored simply because not thought of by medical men, some of whom are by no means physiologists, although they ought to be. And the neglect of this principle of healthy life gave rise to sundry forms of complaint or disease which baffled the best efforts of medical men with all their knowledge, or rather, as we should say, their lack of it. The effect on the mere spirits, as they are popularly termed and known, of dark and gloomy sun-shaded rooms is but too well known to many (see the volume entitled "The Sanitary Architect"). But although well known, and although the effects give so much suffering and are justly dreaded, but comparatively few know the cause. We have known cases where the spirits of a family have been at once raised and relieved by simply having their rooms made light and cheerful, which before by dark and gloomy wall-paper, small windows, and by a too free use of trees and shrubs shading the sunlight from the house, were afflicted with chronic low spirits. That we are not making too much of this point, those of our readers who are physiologists will at once admit.

We have said that wall decoration by means of self or single colour

need not necessarily be deprived of the effects of variety in colour. Assuming, then, that the self-colour has been judiciously and artistically selected—as, say, for example, for the walls of a drawing-room, if not a pure white, a white slightly tinted blue, so as to give what some call a “French blue,” or toned slightly with yellow to give what is called a “cream colour”—the simplest mode of giving a pleasing variety of colour, and indirectly that of form or general design, would be to carry a narrow band at top of wall, dividing or marking it off from the ceiling. This band should be coloured; and of course the shade of colour adopted must be complementary to the general shade of wall surface (see the volume entitled “The Ornamental Draughtsman” for remarks on colour, and an explanation of what is meant by complementary colours). Or, in place of a simple band or line being used, a fret or some one of the various forms known as ornamental (see the volumes entitled “The Ornamental Draughtsman” and “Form and Colour in Artistic Decoration”) may be used to form a border more distinct and pronounced than that given by a simple band. A higher variety, both of colour and of form or design, may be given to the wall surface coloured, as above noticed, in French white or cream colour by dividing it into a series of compartments by vertical bands of colour. These should be met with horizontal band at top and bottom, so as to form a species of panels, and those rounded at the corners with some delicate and simple ornament. If the colour of these additions to a self-coloured wall surface be judiciously chosen—for hints on which see the volumes above referred to—an effect will be obtained which will be a pleasing surprise to any who may be induced to try this system of wall decoration by anything we have here said.

Nor need this style be expensive. We venture to say, indeed, that the same artistic effect produced by a first-class wall-paper—and it would require to be first-class both in quality of design and in actual make of the paper—could be obtained much more cheaply and readily by distemper, to put a more expensive oil paint out of consideration. If we wish to know what can be done—and how quickly it can be done and cheaply—with distemper as a medium for wall and ceiling decoration, we must go to the Continent. And having some experience of what is done there in this way, we confess to some surprise that attempts have not been made to introduce it into this country extensively; and this more especially amongst the working classes and the small tradesmen who have but limited purses. Most beautiful effects in wall decoration with self-colour alone can be obtained by it at a cost but little—and very little—exceeding that of ordinary whitewash. If indeed the sense or appre-

ciation of colour formed part of the education of all our workmen, as under a more enlightened system it will, we feel convinced that a large number of them could apply distemper or simple colour washes to the decoration of their homes, which would yield valuable results both mental and moral, and physical or physiological as well. There is nothing to prevent—much, indeed, to urge upon the workman the utility and value of decorating his own home at a cost, as we have said, but little above that by ordinary whitewashing, which of itself, by the way, is a valuable system—ininitely more so, from what we have said, than the present one of either dirty walls in the ordinary plaster surface, or those covered by cheap paper, absorbent in quality and atrociously ugly in colour and design.

As to the principles affecting the design of wall-papers we have, as already remarked, comparatively little to say. Much referring to this department of furnishing design is included in the remarks we have offered as to other departments. The general principles of design, so far as form or the pattern so called is concerned, are applicable to wall-papers as well as to other decorated materials. And as colour enters, as a rule, largely into the general design of wall-papers, this, as we have seen, should be judiciously arranged so as to give the sense of repose. This will not be given should the colours not harmonise, and this even where the number of colours are few. It is not that the unsatisfactory look which some wall-papers have arises from having too many colours; it is from the fact that these do not harmonise. Colours may be very numerous, and yet the whole may not be at all distracting to the eye, but may, on the contrary, give that sense of repose we deem to be essential in all design, and that simply because they are so selected and arranged that they give a harmonious whole.

Principles of Design applied to Wall Decoration.

The two characteristics of a wall-paper, the design and the colour employed in it, form together and include the principle of what is called fitness. The term design is here used as indicating what in popular acceptance is considered to indicate the subject for decoration selected, and the form it assumes, conventionally treated or otherwise. This “fitness” demands, therefore, that the wall-paper should be “in keeping” with the general furnishing of the room. This expression is very commonly used, and it means that there should be a harmony between the wall-paper and the furniture and decorations of the room. In this sense a wall-paper is to be considered as the background, so to illustrate it, of a picture, and should be such that it does not weaken or destroy the effect of the foreground

or central part of the picture by being in itself very prominent—perhaps even more so than the foreground itself. No doubt the background of a picture has its own peculiar characteristics, and must be treated, as every true artist treats it, with as much painstaking care as any other part of his picture. But in all cases where it occupies its proper position, and is correctly treated, that position is always subordinate to the leading part of the picture, and that treatment is—to use an expression best adapted to convey what we mean—subdued.

This subdued characteristic should be one most carefully attended to in the designing of wall-papers, both in the design or pattern and in the colours selected by which that pattern is decorated. All colours which are said—and indeed with the majority of people are known and felt—to be glaring and vulgar should be avoided. And to avoid also the necessity which would be created of giving large patches of colour by the requirements of the pattern, that pattern itself should be subdued. This precludes the employment of large and sprawling forms with wide or broad surfaces. The forms should not, however, be so minute as that the eye within a reasonable distance from them cannot discern what that form is. If form is to be used as a means of decorating, it is folly to give that form so that it cannot be distinctly traced by ordinarily good eyesight, and within the usual range of ordinary-sized rooms. If not seen it need not be placed there, and the expense of so placing it might as well be saved.

The same remark applies to the colour: while good taste demands that this should be subdued, it should not be so much so as that when viewed at a reasonable distance it is so lost that it merges into a flat surface, which has the appearance of a uniform surface of a self or single colour, the tone of which is given to it by the predominating colour actually used. Some wall-papers, both in pattern and colour, are so designed that within even a short distance from them they appear to ordinary eyesight to be surfaces of self or single colour. But it is worthy of note that such papers are, as a rule—supposing the predominating tint or tone, such as it is, is artistic—infinitely more pleasing to a refined and educated artistic taste than papers with flaunting large-surfaced forms and flaring colours. Such papers “kill” all surrounding objects, however well designed these may be—that is, they do not harmonise or are not in keeping with the objects of the room. And it is just for this reason that wall surfaces treated in simple fashion in distemper, or with oil paint in a self or single colour—so that the tone or tint of this colour be judiciously chosen—are in their complete simplicity always satisfac-

tory. There may be differences of opinion as to the claims which a wall-paper of the ordinary kind makes to be designed in artistic taste; there is as a rule little difficulty in deciding that a wall so treated in the simple fashion here named is always in good taste, as it always harmonises with the general surroundings of the room. It certainly does not "kill" them, for it possesses the feature or characteristic of repose which we have shown to be essential to all true and correct design.

Whether the pattern of a wall-paper be derived from natural forms treated conventionally or otherwise, or whether it be obtained from or by purely conventional or ornamental forms not natural, the pattern is almost universally repeated over the surface. The very way in which wall-papers are printed, whether by hand or by machinery, demands that this "repeat" of the form, design, or pattern should be attended to. The price of wall-papers would be simply prohibitive if the pattern of each piece was to be differently arranged. The repeat of a pattern is therefore a necessity of trade or commerce in the article, and it also gives the basis of the general design or character of the wall-paper. Now, the repeats—to use the common or usual, if not strictly grammatical technicality—may be arranged over the surface of the paper in more ways than one. They will, when looked at as a whole, assume not only on each piece certain "lines of direction," but when the pieces or breadths of the paper are placed in position upon the wall, the aggregate or general surface will display the repeats arranged in these lines of direction. These general lines of direction can only be of three classes—the "horizontal," the "vertical," and the "inclined" or "oblique." And these lines may be made up of repeats of form, the outlines of which may be either "straight" or "right" (see the volume entitled "The Geometrical Draughtsman" for a description of the varieties of lines), or curved, or a combination of the straight and the curved. It may appear to the pupil reader that it is a matter of indifference, so far as the general design of the wall-paper is concerned, as to how the direction of the lines is made. But it is not so: the harmony of the whole is very much influenced by the direction of the lines of the repeats of the pattern. Straight up-and-down or vertical lines will be found, as a rule, to take away or lessen the appearance of height of the room. They lead the eye at once to the ceiling by the shortest way, and thus of necessity almost give the impression that the ceiling is low; whereas it will be generally found that if the lines of the repeats run obliquely or in inclined position up the wall surface, the height of the ceiling will appear to be increased. And although this, like the preceding case, arises from an optical illusion,

it operates practically in the way indicated; for while the vertical lines lead directly, and perforce, so to say, to the ceiling line, the tendency of inclined or oblique lines of the repeats is to lead the eye from the ceiling. It does not follow from this, however, that the horizontal line of direction would be more effectual in this way, as it might be said not to lead the eye to the ceiling at all. A very little consideration on the part of the pupil will suffice to show that, of the three directions we have named, the horizontal line of repeat is the least satisfactory. It is very rarely met with in the pattern or design of wall-papers. The treatment, then, of the design of the paper so that the lines of the repeats of which it is always made up should be pleasing to the eye, is of great importance. Mr. Owen Jones, the great authority on ornamental design, has the following remarks on the point, and as they are of suggestive value we here give them as an appropriate conclusion to this department of the subject of general furnishing. "Harmony of form," says this master in the art of design, "appears to consist in the proper balancing and contrast of the straight (meaning by this term the vertical), the inclined and the curved. As in colour there can be no perfect composition in which either of the three primary colours is wanting, so in form, whether structural or decorative, there can be no perfect composition in which either of the three primary figures is wanting, and the varieties and harmony in composition and design depend on the various predominance and variation of the three."

Remarks on the Principles of Design as applied to Furniture generally.

We conclude this department of general furnishing with some remarks on the principles of design of furniture—strictly so called,—which will be supplementary to those detailed criticisms we have in preceding paragraphs given.

There are numerous methods of decorating furniture in wood, the principal being carving and inlaying. Of the latter there are various kinds. The early tarsia-work or marqueterie is the most simple. In this kind of work the ordinary mode of procedure is as follows. Various sorts of thin veneers are placed one over the other, the pattern marked upon the uppermost, and the lines cut with a fine watch-spring saw. Buhl-work (so called from the name of the inventor) is similarly executed, but the materials used for inlaying are in this case metal and shell instead of wood. In the Exhibition of 1851 the novelty of porcelain inlaid in furniture like marqueterie was introduced, and was very highly thought of. The principal error to be avoided in the use of these modes of decoration is excess of quantity. As has been well observed, "an excess of really beau-

tiful ornament tires us, and causes meretriciousness." Attempts are sometimes made likewise to give the effect of relief to tarsia-work on flat surfaces—an error which has already been alluded to. Such inlays should be kept perfectly level. The principles which regulate good design in carved furniture have been treated of. The carving should arise naturally out of the constructive forms, and should be strictly subservient to them. It should be sufficient, but not overdone; bold and free, but never principal. Beds, bookcases, chairs, tables, etc., should be designed with strict reference to use. Beds with footboards so large that they entirely prevent the free circulation of air; bookcases with a great amount of space thrown away in order to render their decoration the easier; chairs so heavy that they are rather fixtures than movables; tables with immense carved projections on the legs and highly relieved tops, are, every one of them, ridiculous to the last degree, and will be deprecated with contempt by the true ornamentist.

It should likewise be remembered that decoration, to be correct in taste, must be rightly distributed. The ornamentation of an object equally all over its surface prevents that unity in design which must ever arise from a due subordination of parts to an initiative idea. "Herein simplicity is the safest guide to beauty." . . . "It should be remembered that contrast is one of the first elements of pleasure, and that *repose* is one of the most valued excellencies of art; thus simplicity serves as the background to ornament, as the cutting of the gem or the foil that enhances the beauty of the jewel. The good artist shows his ability as much in the sparing of his decoration as the bad one his lack of it by over-enrichment in mass and in detail.

Colour in Carpets.

Harmony in colour is of essential importance in the designing of carpets; and after some study of the subject, we are inclined to decide that carpets transgress against the rules or canons of good taste much more frequently in the matter of colour than in that of design. A good deal has been both written and spoken as to the necessity or assumed necessity of conventionalising natural objects before they are used as designs. We are told that it is a flagrant dereliction of true design to give on the surface of a carpet the rounded and shaded representation in its natural appearance of a flower or of foliage: that these should be conventionalised—that is, changed in form according to the fancy of the designer, so that the object shall not only be different in outline, but flat, giving no appearance of roundness, or of the light and shade which this quality creates. There is much, very much, of artistic truth in this, but

more perhaps of what we may call mechanical or physical truth. We use these terms, somewhat strange in the language of art, as indicative of that feeling of unfitness or incongruity arising from a consciousness, more or less developed, that it is mechanically or physically uncomfortable or incongruous to walk over uneven or rounded surfaces. With easy walking, or getting quickly over surfaces, we always associate the idea, if not of an actually level, at least of a smooth surface. For ease we should intuitively prefer to walk over a surface of flat boards, or of a tiled pavement, to going over a surface composed of rough shingle; or of rounded and loose-lying pebbles or small stones.

A carpet may be of a uniform tint and tone, such as used long ago to be employed in what were called "crumb cloths" before the introduction for this purpose of white or grey linen disposed on surface, or as is seen also in certain classes of the woollen and "shoddy" made fabrics known as "druggets," or felted druggets. But where a carpet surface is decorated with forms derived from natural objects, the rule or canon which dictates that those forms should be conventionalised so as to give the appearance of actual flatness, as judged according to the circumstances just named above—that is, of physical or mechanical fitness or congruity for a surface to be walked or glided over—appear to be absolutely correct. And if so, no departure from it in carpet design should be tolerated.

Principles of Design in Carpets.

But, as we are desirous that the pupil designer who comes to these pages for some information upon the subject in which he is practically interested—namely, house "furnishing," that is, taking a wider range than merely that of house "furniture"—should endeavour to look at any subject, or department of a subject, from more than one point of view, we would present the following considerations. We have drawn pointed attention to the fact that there is a feeling of decided incongruity or of physical or mechanical unfitness in having a surface which is to be frequently passed or walked over rough—that is, made up of solid objects, or, as we usually express it, a rounded surface. But much, if not all, of this feeling of incongruity depends upon the character of the objects of which this rounded surface is composed. If we knew, for example, that the objects were soft, so that they gave way to pressure, we should know that there would not be the same inconvenience in walking over them, or with fashionably tight and thin-soled boots or shoes the same pain as we should have in traversing the surface if the objects were hard, unyielding, and "knobbly." True, another element of discomfort—

but not of absolute pain, as might be in the other case—might be created in the sensation or feeling that while soft the objects might be clammy and adhesive—as, for example, nodules of clay. But we can easily conceive that the objects lying on or forming the surface to be walked or glided over, while they were soft, so as to give way to the pressure of the foot and release it, if not from the pain, at least from the inconvenience created by pressing upon hard, unyielding and irregularly formed objects, might be possessed of another quality—namely, that of elasticity—which would enable them when pressed upon, and therefore trodden for the time so as to be out of shape, to resume that shape sooner or later, after the pressure was removed. In this condition of matters all sense of incongruity arising from the mechanical or physical unfitness would, if not wholly, at least largely disappear, so that we should have no hesitation in walking over a surface so constituted, as we should know that what would appear to be the destructive effect of pressure under other circumstances would not operate in this circumstance, as pressure would be counteracted by the inherent elasticity of the objects. This is precisely what we experience in the case of natural surfaces covered with grass; for, in place of feeling any of the discomfort arising from incongruity or mechanical or physical unfitness, we have a positive pleasure in walking over a grass-covered surface, and if that be, as it often is, besprent with flowers, gay with buttercups and daisies, we have no compunction in treading upon them, or feeling of physical discomfort in doing so, for we know that as we pass from them they will rise again in all the freshness of their beauty. This specially in the case of some elegant and sprightly maiden, who, tripping gaily over flowery fields, to the poet at least gives the impression that the floral beauties will be none the worse for her tripping over them—as they “rise elastic from her fairy tread.” Nay, more than this; for, as well pointed out by one who is as able an exponent of the principles of art applied to design as he is a lover of nature, it is remarkable that grass in its rare humility seems to flourish the more, the more it is trodden upon. From what has been now stated the pupil will, we trust, see that there are more aspects than one from which a subject may be viewed: that if not positively dangerous, it is at least unsafe for him to decide that his own view is the only one which can be taken of it. If we make up our mind that there is only one way of doing work, we clearly shut ourselves out from any other method of doing it, inasmuch as we do not perceive the necessity to inquire whether there be any other method. He who is open to the conviction that there *may* be more than one way of doing work is much more likely—as he will then

be prompted to inquire whether this is in reality so—to arrive at a knowledge of which is the best way, than he who starts with the assurance that there is only one way, and that, in nine cases out of ten, will be the way he, either from prejudice or what he claims to be truth, decides to be his own.

Canon or Rule as to Ornaments in Carpets, etc.—Conventional and Realistic Treatment of Ornament.

The canon or rule—or the opinion which is by many raised to this position of authority—which decides that all natural objects, beautiful in themselves, as they willingly admit (what, however, they could not as *per se* well deny), as applied to design should be conventionalised or altered in form, and represented so as to be flat in surface throughout, may be absolutely correct—that is, that it *is* a canon or rule. It is not our object here to give a positive opinion upon this subject: we leave our pupil to decide for himself whether it be so or not. But it is our object to place before him all the considerations which will enable him to make this decision. We have thus shown that there are certain considerations which do affect the question of fitness or congruity in carpet design. And these considerations are essentially different from those upon which the “conventional school” of ornamental design decide that all carpet ornament should be flat, inasmuch as they say that there is an incongruity in giving or representing on a surface which is to be walked over, an object which conveys the idea that it will be either painful or uncomfortable, or both, when walked over; and that the considerations opposite to this, which we have explained as characteristic of what has been called “Nature’s carpet of grass and flowers,” are surely worthy of at least as much concern to the designer as the other.

Moreover, this point must not be overlooked. Those of the “realistic” school of designers, who maintain that natural objects may be represented in a design, as in that of a carpet, just as they are presented in nature, have at least a strong point as an argument in favour of these views. And this is, that there is but one rule to guide their work. Having decided on the natural object or objects to be applied to the decoration of a surface, such as that of a carpet—the department of house furnishing now under consideration—the artist designer has but one work to do, to copy as faithfully as he can the object or objects of his choice. Various artists will of course have a varying ability to represent faithfully what they wish to copy; but all will of necessity have the same object in

view, the same subject to work from. Here the standard is fixed, and a camellia of the one artist is a camellia, and can be nothing else. And, however much one camellia may vary from another in one or two minor details, every camellia has the peculiar characteristic of the flower, and this is possessed by all—being that, in fact, which distinguishes it and sets it apart from all other flowers, so that a camellia can never be mistaken for a rose, or a rose for a camellia.

But the case if not essentially is widely different when we come to consider the claims of the “conventional” to be considered a fixed school with definite rules. The very term conveys angularity and irregularity. For the conventionalising of a flower, for example, depends wholly upon the individual notion of the artist as to what the “conventional” treatment is to be. A camellia, if its natural appearance is to be ignored, and any representation of it in its natural form is to be deprecated, may be by one artist so treated that his “conventionalised camellia” will be very different indeed from the conventionalised camellia of another artist. When some variation from the true natural form is decided upon as a necessity of true design, and this variation is to depend—as it must of necessity depend—upon what the individual may conceive to be the best variation, who is to decide which of the different variations is the best? What rule or standard is there by which to decide whether one variation is better—that is, more artistic—than another? How, the pupil may ask, can a standard be fixed, which standard must be definite to be of any value at all, when the practice is of necessity indefinite? Whatever may be said *pro* and *con* on this vexed question in art, this at least may be said in favour of the “realistic” school: that it has something definite to go upon. But if this cannot be said of the “conventional” school, it at all events can be said for it that its very principle is variety; and that, if the variations of form be different with different artists, the necessities of the case are fully met if the variation be in itself pleasing to the eye; an ugly variation would condemn itself. Only the misfortune is that the popular taste is so far from being a cultivated one, that—as we have seen, and as is unfortunately but too easily verified in daily life—an ugly variation is just as readily accepted as a beautiful one. Now, the “realistic” school do claim this: that, although a flower as a natural object be not copied with absolutely artistic correctness, it must be very badly copied indeed if it has not the general characteristics of the object. It is scarcely possible for a designer with any pretensions to be considered an educated or trained draughtsman to attempt, or be allowed as a practical man—paid for his practical work—to

attempt, the design of a carpet who showed a positive ignorance of drawing. A conventionalised drawing of a flower may be anything—just precisely, in fact, what the artist claims to be a correct conventionalised treatment; but which another of the same school may, applying a criticism founded upon an opinion of an opposite or different character, condemn as bad. And yet one could claim authority as much as the other—for definite authority there would be none—each artist being “a law unto himself.”

There is no doubt that this freedom of individual action which the conventional school of artistic design gives carries with it many advantages, as it gives at all events a great and wide scope for the development of design. We are much disposed to hold the opinion that it would be the better for the spread of an artistic taste amongst the people if there were no hard and fast line which tied up designers so as to belong either to the one school or the other. In this, as in other things, the middle course would perhaps be the best, this allowing a follower of the one school to be so free from prejudice as to practise, if need be, in the principles of the other—simply, and as a rule, considering that the best work would be given. If this were generally followed, we believe that a more widespread and healthy influence upon art would be created. Fitness, then, would be the guiding rule; and this being so, we should see by the same artist a design treated on realistic principles at one time or conventional principles at another, or a happy mixture of both might be given in the same design.

This idea of fitness or congruity will always, in point of fact, dominate the work even of the designer who belongs to the “realistic” school. Bearing in mind such considerations as we have given under this head of carpet treatment in design, the designer would never think of decorating his surface with realistic representations of shells or of pebbles or stones. All ideas of congruity or fitness would in such a case be recklessly and as stupidly set aside. The very idea of walking upon such a surface would come intuitively to every mind—that is, thinking mind—as one in itself practically absurd. If natural objects are realistically represented, let them be appropriate to the surface to be decorated. On the other hand, the designer of the conventional school might take a natural object which represented as such would be unfitted for a surface, and so tint it conventionally that a flat form of great beauty would be the result. We cite as an example—not, however, admitting that it is truly beautiful, but simply as illustrating what we mean—the well-known “shell” pattern so much used in shawl designs when shawls were used as articles of female adornment.

We have said that great prominence has been given to the claims of the conventional school of design to be considered the only one—its canons, if they be such, those only which are to decide what design applied to art manufacture should be. Not merely as showing what can be said on the other side, in favour of the realistic school, but as indicative of the importance of the point we have impressed upon the pupil, of looking at a subject from more than one point of view—trying to see how many points there are—we give the following. On the subject of carpet decoration, Mr. Ruskin, the well-known writer on art, thus dilates, his remarks referring in the first place to a complaint by a well-known advocate of the conventional principle of treating ornament—that so far as carpets were concerned the ladies were to blame as being the chief transgressors against the conventional treatment of flowers and foliage, inasmuch as they would insist upon having those treated realistically on their surfaces. Mr. Ruskin does not join in this censure of the ladies, chiefly because “he knew a most respectable and long-established firm, engaged in carpet manufacture on an extensive scale, which conducted its business” precisely on the principle which the conventional school opposed. Mr. Ruskin referred in this to the firm “whose head partners during the months of April and May supplied a large part of the world with green carpets in which floral design was largely introduced, and he believed generally to the satisfaction of the public.” Mr. Ruskin readily enough accepts the doctrine that the “material and the use of the object to be produced should be first consulted,” and further, that “no art production was right unless first of all serviceable for its proper purpose.” But he nevertheless pleads most strenuously, “beyond all this, for the direction of the workman straight to nature, whenever he had to introduce ornament at all. All the true nobleness of art had come from people loving nature in some way or another expressing their statements about nature; and exactly in proportion as the reference to nature became more direct, the art became nobler.” It is difficult, indeed, to gainsay all this: it lies at the very base of all artistic work; for it is from nature and nature alone that the ever-varying forms which the true artist delights in are derived, and from which alone they can be derived. The more directly, therefore, we draw our inspiration from the fountain-head, the more obviously are we certain to gain the purest inspiration. If the sense of fitness in any decorated object be secured, we may rest assured that the decoration employed cannot be far, if it be at all, wrong; and be it remembered that this fitness includes, and is indeed dependent upon, the material used and the purpose for which the object is made.

Principles of Design as practically applied to Articles of Furniture.—Grates, Lighting Appliances, etc., etc.

Leaving now the subject of carpets, we come to that of metal decoration or furniture of rooms, under this being comprised the fixtures for lighting and grates and fenders. The general tendency to over-decoration in this department is one of the greatest evils that the designer herein will have to combat. Many of the articles included under this head—such as candelabra and gas fittings generally—are sadly at fault in this particular. The French taste for superfluity of ornament, and the English taste for imitating the French herein, have contributed to spread amongst us the very worst possible specimens of decorative art. Candelabra with every portion of the surface covered with flimsy and inapplicable ornament, chains dangling over the heads of sportive cupids, bunches of bristling foliage sticking out of the stem where the hand should grasp the object, and flowers modelled in exact resemblance of nature holding the candles, are—at least but very shortly ago were—as common in this country as the shops of the gas fitters. We certainly do better in some divisions of the hardware department than in others. Our grates are on the whole much superior to those which the French produce. They are less loaded with ornament, the utility of the article receives more consideration, its construction is every way better attended to, and the materials are more judiciously treated. The English “idea” of a grate is altogether the simpler, honester, more direct. No doubt our national necessities, arising from the greater cold of the climate, have had something to do in the production of this superior excellence. The fact is, however, indisputable.

The stove has never been popular in England. In the United States the use of the stove is so universal that, during a tour of seven months there in 1864, we recollect to have seen but *two grates*—one in a public-house kept by an Englishman, the other at the residence of a gentleman in Trenton, N.J., who rather affected British tastes. Stoves are there used for every room—dining- and drawing-rooms, hall and kitchen—and are frequently met with of a highly ornamental character.

Fitness an Essential Feature in True Design of Articles of Furniture.

Honesty of construction, perfect adaptation to intended purpose, simplicity and fitness of decoration, and a judicious purpose of the materials employed, are the main points for the designer's attention in the department of grates, stoves, and articles of hardware generally. We have throughout, in considering the application of design to the manufacture of furniture and furnishing, insisted upon the

designer keeping always in view the attribute of fitness. This term, as we have seen, includes or comprehends all those points which we have shown to be so important—points connected with the material employed and the purpose for which the material is used, that purpose including convenience in use. We prefer here to use this term “fitness” in place of “utility,” for if the object be fitted for the purpose in view it will be sure to be useful. And if this principle of fitness is to be attended to in any department of furnishing, it surely ought to be in everything connected with the fireplace, to which we owe so much of our comfort, and round which so many delightful and tender associations cluster. We read in the criticisms of designs for other parts of furniture or furnishing of “traps and pitfalls” for the users of the objects, but certainly the censure conveyed in the criticism applies doubly here. Take, for example, fenders: these, as keeping, warding, or “fending” off glowing or red-hot cinders falling from the grate on the surrounding surfaces, serve a very useful purpose. But how frequently do we see them so designed that the dominant, indeed, the only idea which they convey is that the designer—if in truth the term be applicable to one who thus gives evidence that he has had no real design or thought as to what was intended by the article—was only thinking of the fender as a something which was to be the vehicle to be loaded with ornament of some kind! If this ornament—falsely in these cases so called—could only be applied in amount enough, and so pronounced that no one could fail but to see it and be impressed with the conviction that it was ornament, the object of the designer was apparently abundantly served. Ornament they had been determined to have, no matter of what kind, so that the “quirks and quiddities” of extravagant or grotesque form were abundant enough, staring and glaring enough. But if fitness or utility includes and demands convenience, as assuredly it is included and required, then such designs for fenders fail. The mere bulk and profusion of ornament tends to give such a ponderous weight to the article that its easy lifting and moving for the purposes of tidiness and cleanliness, which should be the mark of every fireplace, is a matter of difficulty even to the robust and strong of the domestics, who are alone concerned in the matter of household order and cleanliness. But this is not all: in the intense desire of the designer to have ornament—no matter what, so that it should be what he deems ornament—he loses sight of what that ornament may involve. We have known instances of fenders so decorated that the very nature of the ornament made it a harbour for dust and rust, and such a secure harbour that it was almost impossible to dislodge the one or get rid of the other

by any industry of the housemaid, or by means of the appliances which she generally employs. So numerous and intricate the depressions and corners, that specially made brushes would have been required to reach them to get rid of their deposited dust or accumulated rust. But the indictment against such designs is not yet closed. It would be bad enough if only extra care were demanded of the housemaid in keeping the fender clean, or extra strength to move it; but the matter is made worse by the absence of all thought on the part of the designer as to what the character of his ornament involved. We have seen the ornament to be of such a nature that much of it presented parts which were positively dangerous. Without the exercise of the greatest care it was impossible to clean the article without getting scratches and sometimes severely lacerated hands. And this extra care is not always given; indeed, it is some time before the housemaid learns by painful experience the treacherous character of the object she has to do with. Such awkward, inconvenient, and even dangerous articles have no claim to be considered as objects of furniture at all, which when true in character must possess fitness for all the purposes in view.

The same lack of true design—which, as we have shown, includes forethought—is observable in other parts of the fender, as, for example, in the standards or supports sometimes added for the resting of the fire-irons upon. These are almost always fixed, or said to be fixed, in such a way that to the annoyance always of all, and to the real distress often of the sick and nervous, they are dropping out, every now and then, of their sockets, and falling down with their supported fire-irons, create no small noise. The same false notion of the position ornament or decoration should occupy in relation to the object is no less observable frequently in the design of the grate itself. Overloaded and highly pronounced or projecting ornament we see in but too many cases—ornament which is a bad decoration, but a good harbour for dust, not easily removed when once it gets lodged in the interstices of the pattern, and sometimes, as we have seen in the case of fenders, a source of danger. As for the design of the grate itself, in which the fuel is consumed, much could be said; but in too high a proportion of instances it may with perfect safety be stated that their designers have not apparently the slightest conception of what combustion of fuel is, and what appliances it demands.

Principles of Design as applied to Curtains, Hangings, etc.

We now take up for brief consideration the subject of curtains and hangings, including table covers. Certain general canons obtain

in relation to the ornamenting of the above-named fabrics. We give a statement of them below. The ornament should be flat. All attempts to relieve the motive or the feature or lines of the design from the ground are in bad taste. This applies more especially to table covers, where the decoration arises from the distributions of gloss in weaving. Buildings in perspective and fruits in relief upon table covers are absurd in the last degree. Chintz hangings are oftentimes treated in the most ridiculous fashion in contravention of this rule. Roses, lilies, birds of paradise, are mingled in a confusion "to be admired at"—some of them thrown into shadow, some into relief, and all this accompanied by vivid colour and extravagant form. These eccentricities will be utterly condemned by the designer of correct taste, and when he uses flowers or birds in the ornamentation of this material he will conventionalise them and keep them flat. In muslin curtains likewise relief has been attempted, and the strangest decoration used. As has been remarked by a great authority, "It would seem hardly possible to err much in designing for a fabric which admits of such small variation, the contrast of the thick work with the more filmy ground being the source of the ornamental form, and colour being rarely used; yet perhaps there are not more glaring mistakes than are made in the decoration of these goods. In the Swiss muslins the effort seems to have been directed rather to curious skill in workmanship than to taste in design, and some of the most costly goods are in the worst conceivable taste—immense cornucopias pouring out fruits and flowers, palm trees, and even buildings and landscapes, being used as ornaments. Unfortunately these vagaries are not yet extinct, and perhaps will not be, until, by a regular course of educational training, public taste has been educated to something better.

Attention should be paid to the effect produced by the folding of the stuff. This is a most important point, and for want of its due consideration many otherwise excellent designs have been justly condemned. Of course the ornamentist in each department should have a thorough knowledge of the nature and peculiarities of the material he is specially employed upon; else his ornamentation of it must be necessarily inapplicable.

Principles of Design as applied to Paper-hangings.

On the subject of paper-hangings, or wall decoration through the medium of coloured designs printed by hand or by machinery, after the system by which printed calico fabrics are produced, we have here but comparatively little to say, as much of what has been already given on the subject of design generally applies more or less

directly to decoration of this class. We may say, however, with regard to the propriety of using mechanically produced paper designs for wall decoration, that we are not alone in holding the belief that when sanitary considerations are more generally taken into account than they are at present, and when some points in medical physiology are more clearly known than they are now, it is very probable that covering walls with paper will not be tolerated where a due regard to health is given. Some qualities of paper and methods of surface treatment give conditions which are anything but conducive to health; they attract and retain dust, and being of a highly absorbent nature, readily take in atmospheric or gaseous products, which being more or less unhealthy may be again given out by them. Painting wall surfaces is not now so common as it used to be; but those who are old enough to recollect the time when wall painting was the fashion will have no difficulty in deciding that as compared with the modern practice of using paper to decorate wall surfaces, painting in every respect was likely to satisfy sanitary conditions much more completely than paper-covered surfaces. The very facility which paint afforded for being made absolutely clean and pure by washing was in itself a great recommendation—at least, to the old-fashioned housewives, who had no belief in the existence of dirt and dust. No doubt painting to be so treated required to be well done; but in the days we refer to painters, like nearly all other tradesmen, took a pride in doing the very best work they could, having then some regard to principle, and not always thinking about profit. The writer well remembers the painted wall surfaces in his father's house—we are now, of course, referring to oil paint—which had been painted so conscientiously that the surface was more like a hard enamel than ordinary paint. Even in the few cases noticed of late years in which painted wall surfaces have been adopted, and where the "very best workmanship" had been professedly given—at least paid for—the quality of this best modern work had no pretensions to the high quality of the painting done in olden times.

No doubt painting in good style is a more expensive method of decorating wall surfaces than that of covering them with printed designs on paper; but a cheaper and very effective method is within reach of all, even the most economical—namely, "distemper," or simple colour washes, treated with "size," so as to be fixed, and not liable therefore to be rubbed off. Again, it may be objected to both painted wall surfaces and to those treated with simple wash, colour or distemper, that there is a sameness of effect, giving a dull and dead appearance as compared with the liveliness of a wall surface decorated with paper in the design of which there are both multi-

plidity of colour and variety of form. But this objection, we venture to maintain, arises from false, at least crude, conceptions as to what beauty of surface or, say, good design in wall decoration should be. Neither variety of form nor abundance of colour will give a good wall decoration simply by themselves; they only—and indeed but too frequently do—afford a decoration altogether false when considered on sound principles, and often glaringly ugly and offensive even when looked at and judged by what may be called the canons of a partially or even wholly uneducated artistic taste.

After some study of the artistic effects produced by plain-coloured surfaces—either in distemper or in oil paint, or what is called self-colour—and that produced by wall papers the design of which is pronounced good by an educated artistic taste, we have no hesitation whatever in saying that the artistic advantages lie wholly on the side of the wall surface decorated in self or single colour, whether that be given by oil or by distemper. All artists are agreed in one point, however much they may differ on many others: that when a design or a style of decoration gives what is called “repose,” it may safely be considered that the design or style is good, and based upon correct artistic principles. Now, granting that the tone or tint of the self, or say single, colour employed is judiciously selected, we venture to say that this feeling or attribute of artistic repose will be secured—secured, at all events, in a much more complete and satisfactory way than by any or at least by far the largest proportion of the wall papers now in use. Some are so coloured that the eye is positively fatigued in its endeavour to discover but one part of the surface on which it can rest with satisfaction—that is, there is no repose in the colour taken as a whole. The effect is simply distracting, and in proportion as it is so may the effect of the colouring as a *whole* be unsatisfactory. And in too many instances the colours are positively annoying, from their glaring and conspicuous character. Then, again, as to design, wall-papers have their pattern—which may be coloured badly in addition—so arranged that the eye finds no rest in looking at it; it is distracted by the many directions in which the pattern leads; there is no distinct feature which gives repose.

Now, in self-coloured surfaces these risks are certainly avoided, granting always that the colour itself is judiciously chosen. If this be done the colour itself is pleasing to the eye, and repose in this respect is obtained. But sometimes there is no pattern, the details leading this way and that—in fact, as is often the case, they give no idea of any distinct way, but simply exhibit a conglomeration of form or forms, having as little pretension to design—that is, of

thought to give a specific purpose—as if the forms had been put into a large pepper-box or flour-dredger, and dusted over the surface of the paper, adhering to it at whatever point they happened to fall. And of the colours the same may be said. In such well decorated surfaces by paper designs there is, in a large majority of examples, no feeling or sense of “repose” at all obtainable.

Nor need the effect of colour in variety of tone be lost; and in many, if not all cases, it is desirable to secure this in wall decoration, when the system of self or single colour in paint or distemper is employed. We have said or implied that it is necessary, in order to secure artistic repose in this system of wall decoration, that the colour in tint and tone should be judiciously chosen. As a rule having few exceptions, light colours are for this climate of ours always more effective than dark ones. And this holds the more decidedly true in cases where rooms are small, and where they are but indifferently lighted—that is, not well windowed, to coin a term which precisely conveys our meaning. Now, these conditions are those which nine out of every ten of the rooms of our domestic dwelling-places afford. The exceptions are large rooms and well-windowed ones. And in this climate we have so much gloomy and so comparatively seldom bright sunny weather, that we do not require to add to its atmospheric effects by our constructive or decorative work.

There are other points connected with this subject, which in principle apply largely to other departments of the decorative work of the cabinet maker, but which space prevents our going into here. This is the less to be regretted, inasmuch as we have had space sufficient given us to point out the leading principles upon which the art and practice of the cabinet maker are based. Should these be studied by the young practician, and his studies prosecuted in the same spirit in which our remarks are given, we may safely promise him that he will derive a large amount of mental satisfaction from the fact that he has given intelligent thought to his practical work, and further, that the value of that work will be greatly increased.

Wider Field for the Cabinet Maker to Cultivate in Adding to the Conveniences and the Beauty of Domestic House Furnishing.

In the preceding paragraphs we have considered the general principles which underlie all good work in the art of the cabinet maker, embracing in this term not only the work of design, but also of construction. And we have endeavoured to enforce on the attention of the young artisan and student the importance of the truth, that he will be much more likely to be successful in the application of these principles to his daily work if he encourages the habit of

thinking for himself as to what the character of the work really is, than if he blindly accepts as correct what is said to him even by authorities who have a true claim to consideration. This thinking for himself will frequently lead him to perceive that opinions, or what are claimed even to be rules or canons, may in his practice be modified with great advantage to his work. But should this not always be the case, the value of the habit of applying thought to his work, both in design and construction, is too great not to be attended to most carefully, and if possible secured.

We have also in the preceding remarks considered cabinet making from a wider point of view than that which looks upon it as the art of designing and constructing what is known, or popularly considered to be, furniture only—that is, chairs, tables, sofas, and the like. We have considered it as embracing the art of furnishing dwelling-houses, etc., generally. This wider field is one which, in point of fact, distinguishes cabinet making as carried on especially by the larger houses, who undertake really to furnish a house or other establishment, as hotels, etc., completely, from the carpet to the curtains. And in support of the claims of this, the wider art, there is much to say. For we have attempted to show that, looking upon a room as an object which in its furnishing is to give pleasure to the educational artistic taste, it is difficult—practically, indeed, impossible—to have the design of the furniture strictly so called—that is, the movable parts, as chairs, etc.—done justice to, unless the character of the other or general furnishing is in keeping with it. We have attempted to show that, while each department has its own special characteristics, all the departments must harmonise with each other, so as to secure that repose which we have shown to be essential to good design.

Special Details of Cabinet Making.

But while there is the general aspect of this, the wider view of the art of the cabinet maker, to be considered, the special or detailed view of his art—which constitutes, in fact, his work—forms the main subject of the present series of papers. While it does not lose sight of the wider field which the cabinet maker may be called upon to cultivate and to enrich by his labours, it has for its peculiar office to take up the details both of design and construction, combined with the making of those articles included in what every one knows to be, and what practically constitutes, *furniture*. To these details we therefore now direct the attention of the young student and artisan. To use a term generally employed, for lack of one more precise and definite, such a definite term not yet being agreed upon, we have

seen in preceding paragraphs how the "beauty" of a piece of furniture depends upon the form, shape, or configuration of its parts, and also of those considered as a whole. The varieties of form are endless, for the combinations of the lines and curves of which they are composed may be said to be inexhaustible. But there are certain forms or outlines of objects which may be said to be elementary, inasmuch as they are used more or less by all. Such forms may be called the alphabet of cabinet making forms, by the combination of which finished work is produced. The characters, so to say, of this alphabet we now proceed to present. Unlike definite alphabets of language, that of our art is somewhat unsettled in its characters; and this of necessity. We cannot therefore fall back upon any recognised arrangement, but must perforce determine upon one of our own, taking care to make it as systematic as the discursive character of the elements we have to deal with permits.

Design as applied to the Work of the Cabinet Maker.

But although the application of form and ornament to the various articles which make up the furniture of our houses may be said to be dictated by, as it is practically subjected to the mere will or caprice of, the individual artist or workman, still there are certain rules or canons of what is called the art of design which upon the whole are generally accepted as conveying much that may be taken as in all cases and at all times correct, and therefore capable of universal application. Those rules or canons have special reference to the decoration of form, and will be found fully explained in the series of papers which treat of the application of form and colour to decorative work. But in connection with the subject of the present paper we attach to the term "design" a more comprehensive, and as we hold a more correct, signification than is generally attributed to it in the majority of our schools. In the case of furniture we apply it in the same sense in which a mechanic is said to design a certain mechanical arrangement, or an architect or builder to design the arrangement of a house. In the case of the mechanic, he is said to invent a machine when he applies certain mechanical movements to the doing of a work, and in such a way that it has never been so done before. But these mechanical movements, considered as individual parts, are not new; they have been used again and again, and form the common property of all mechanics. But in the peculiar arrangement of those movements, and their application to the particular machine he has invented, he is said to design. In this case, as in that of the architect and builder in planning a house arrangement, the designing is simply the thinking out of the subject: taking, in the

first instance, the fact that something is wanted, some work to be done, and having a knowledge of certain things or principles applicable to the work, they apply those by a process of thinking to the designing of the work, so that it shall meet as fully as possible all the requirements which that work is intended to fulfil. In this sense *design* may be interpreted to mean that when there is a given work to be done, the way in which that work can be done in the best possible manner is to be carefully thought out; all the knowledge derived from study or experience which one has, or which can be gathered from the experience of others, being earnestly applied to this "thinking of the thing out."

Wider Sense of the term "Design" to be considered by the Cabinet Maker.

Now, this wider sense of the term "design" must not be lost sight of in the work of the cabinet maker. It may appear to some of our youthful readers a strange thing to say, that the first thing in design is to know what is wanted—what purpose the object or article is to serve. One might be apt to say, Surely this will always be done or known; one cannot make an object which has to serve some definite purpose unless one knows what that purpose is. This would appear to be the common-sense conclusion, but it is not always the common-sense result of attempts to do work. One may have a general conception of what the object of an article is, yet fail but too notoriously to attain that object. To make one thing to be like another which is perfect is comparatively easy; to make it exactly similar is quite another, and by no means always an easy thing. The cabinet maker may construct a piece of furniture which is *apparently* well fitted for the object of utility or convenience it is intended to fulfil; but it is only when its owner uses it that he finds this is in reality apparent—that the object is anything but well suited for its purpose. Such an object cannot be said to be designed at all, for design in the true sense of the term involves a perfect knowledge of the purpose for which the object is made, and which will only be useful if it really serves that purpose; but design also involves the most careful thinking out of all those details by which that purpose will be best effected. It is, unfortunately, too true that many articles of furniture in—and, to use the wider expression, of furnishing of—a house, so far from serving the purpose in view of which their construction or making was demanded, are, on the contrary, so far wide of the mark of utility, that they are the source of perpetual annoyance and disappointment. Now, in such a case, the maker of the article has had no true conception of the purpose for which it was wanted, for, beyond a doubt, if he had, he

would not have so constructed it that it could not possibly serve this purpose of utility.

Further Points of Design to be considered by the Cabinet Maker.

Paradoxical, therefore, as it may appear to some—absurd to others—of our youthful readers, our statement conveys an amount of practical truth singularly overlooked in work: that before the workman can supply an article which is wanted, he must know what is required in connection with it. How fatally—to all the true purposes of various articles of furniture—this truth has been neglected is but too widely and well known to those who have closely studied the true principles which should dictate the design and construction of articles of furniture and of furnishing, and to not a few of those who have had the misfortune to purchase them, buying them for use, to find out that they cannot be used unless at the sacrifice of comfort and convenience. We have thus impossible chairs and impracticable tables; sofas intended for rest and repose in which no rest or repose can be obtained; easy chairs, so called apparently in mockery of the objects of the user in purchasing them, as no ease can be had out of them; hat-rails and hooks placed where certainly hat-rails have no right to be, unless put there with some vague notion that they are ornamental, not with any idea of their being useful. For to use them is a practical impossibility for the most of men, unless they are of the race of Anak, for it is only a giant who could reach them. It would be easy to multiply instances of articles of furniture and of fittings which, neither in the way they are designed and made, nor in that in which they are fitted up, give any evidence of thought having been given to them, even in the very first or primary step in the process of production—namely, the object or purpose which the articles were intended to serve or to fulfil.

General Canons of Cabinet-making Design.

We cannot, therefore, too strongly impress upon the youthful cabinet maker the absolute necessity there is for him giving the closest possible attention to the full comprehension of what is wanted in any article he is called upon to design and make. The primary aim and need of all furniture and furnishing is that each article shall minister to comfort, and that it shall do so in the most convenient way. Comfort for use, convenience in the use, involve of necessity the best workmanship, so that what is designed to be stable and permanent shall be truly so. And those attributes being secured, then, if the decoration of form or of colour be given to the articles,

they possess a higher value, and minister to another class of mental attributes than those which appeal to comfort and convenience only or chiefly. We have, then, articles combining the two qualities of utility and beauty; and it is in giving the latter that the other part of design—using the term in the wide sense in which we apply it—comes into operation. As to the principles which dictate the application of form and of colour to decorative work generally, the reader will find ample matter in the proper treating of the application of form and colour to industrial decorative work. As to its application to the specific purposes of the cabinet maker, we have, in a preceding chapter, given sundry hints.

Practical Business Points Influencing the Work of the Cabinet Maker.

We have taken occasion to mark with some degree of plainly expressed censure the carelessness or indifference of many workmen to the primary object of all design—namely, the making of articles which are supposed to be useful in such a way that they really will be so. But, in all justice, it is only right to declare that workmen in this regard are not always to blame. There are many men who have not only the ability to design in the full and extended sense in which we have used the term, but also the skill to make articles of furniture and of furnishing which would meet all the requirements of good honest work. But if they gave this in the form their higher knowledge and experience would dictate, the great probability is that the articles so made would not sell. And to one who to live lives to work, selling what he has made is simply the one thing indispensable. He is therefore, in fact, by the “stern necessity to live,” compelled to make not that which he knows to be right, but that which his customers wish or believe to be so. And in nine cases out of ten the public or purchasers decide that whatever is fashionable is right. “Whatever *is* (in the fashion) is right” is the motto to which—in this matter, at least, of furniture and furnishing—the public take most readily, and in the truth of which—if there be truth in it—they firmly believe. How much there is of a principle which leads to the foundation of a rule of definite and precise value in practice, this “fashion” is but too well illustrated in the very fact that the term fashion is synonymous with all that is vague, uncertain, and capricious. And it is but too well known how fashion gives rise to the wildest vagaries, in which comfort, convenience, and even health are wilfully and, what is worse, willingly sacrificed, and everything which common sense and prudence dictates ruthlessly set aside as worthless in comparison with the demands of the fashion which has been defined truly as “tyrannical.” And although it is

generally—we may say universally—the case that fashion, however absurd, originates with the richer classes—those who give the tone to, and what is called lead society—it is to be greatly regretted that it does not rest there, but percolates, so to say, through the under strata of society, and, permeating their mass, affects even the lower classes with its mania and all the sillinesses, and sometimes positive evils, with which the “fashion” for the time being is characterised.

“Fashion” as Influencing the Work of the Cabinet Maker.

In this phrase, the “time being,” we have another characteristic of this “tyrant fashion”; it is not only uncertain as to what its peculiar manifestation may be—the fashion of to-day being quite opposed to that of yesterday, as that of to-morrow will be to that of to-day—but the period during which the fashion is to reign supreme is unknown to even the most devoted of its followers. The kingdom of fashion is subject, so to say, to a perpetual series of revolutions: no sooner is the king established, and so firmly that it seems as if his throne will be perpetual, and as he is yet soothing himself with the thought that he is “monarch of all he surveys,” than the mysterious fiat goes forth by which he is deposed and another king reigns;—that mysterious fiat which emanates from no one knows who, is promulgated no one knows how, but is followed with a readiness and rapidity which would be delightful to contemplate if but its object were as useful to mankind as it is generally—or, alas! too frequently—the reverse.

The Bearing of Fashion on Cabinet Making.

It would, in view of this state of matters, be of course exceedingly satisfactory if “the trade” had the power to lead the fashion. There would then be some chance of a state of things being brought about, better in some respects, at least, than that which at present exists. At all events, if “the trade” failed to grasp the necessities of the case, and all the opportunities which thus would be placed before them, the public would then at least be justified in blaming the trade for being the cause at once of the perpetration and perpetuation of absurdities both in construction and design of our domestic furniture and furnishing. But the true state of the position is this: that, in place of leading the fashion, “the trade” is so completely led by it, that it can do nought else than blindly follow its follies and vagaries; for if tradesmen do not, they will find that their business will be but one of name only, not the reality of a lucrative or at least fully employed trade. No doubt it may be said—what not a few have expressed the hope of—that “the trade” might.

influence the fashion for the time being; and if that be characterised by somewhat more than its ordinary amount of capricious follies and absurdities, these might be "toned down" and rendered less painful to a truly cultivated taste by having some at least of the elements of pure and truthful design imparted to it. But this hope must be dissipated when we look, not at what we would wish things to be, but what they are. For we find that fashion, although so capricious and uncertain in its manifestations, is exacting and peremptory in its demands to the last degree of decision. To be "in the fashion" is everything with many; and whatever that fashion be, they must have what ministers to it in all its completeness of folly or caprice. All or none seems to be their motto: nay, such is the tendency of those who come under its influence, that many go farther on in the path of absurdity than their neighbours, constituting that class who are known to be in the "extreme" or the "height" of the fashion. There is, therefore, but little hope of "the trade" being able to modify fashion so as to improve it.

Some Points connected with Style in Cabinet Making.

The only hope that the present condition of things, which is in the highest degree unsatisfactory, shall be remedied, seems to lie in this direction: that the public, or, at least, that part of it in which seems to be concentrated the power to create the fashion, shall be so educated in the principles of true art that no fashion will be tolerated, or rather will be by them created, which displays any ignorance of what true art is. How much there is of hope that such a condition of matters will be brought about, let the vagaries of fashion of the last few years—nay, the fashion which rages as we write—give the answer to. Take, for example, an instance from the art of architecture, that art which yields us all the elements of what is called the art of decorative design. Its best and most advanced writers and practitioners have for years been advocating the introduction of what they have called a "national" style of architecture—a style which will be as much an indication of our habit of thought, our taste or peculiarities, in short, of our own peculiar characteristics as a nation, as the Egyptian, the Grecian, or the Roman style was an indication of what the Egyptians, the Romans, or the Greeks were, or as the Gothic architecture of later times represented what the people of the middle ages thought, felt, and did. In spite of all the aspirations of those who were ambitious that we nationally should have an architecture which would be a reflex of some at least of the qualities which characterise us as a people—a style which would be as essentially British as that of China

is Chinese—in the face of all that has been written in support of these aspirations, of all the teachings which seemed to go far to realise them, or, at least, show them to be a possible thing to attain to,—what do we find now existing amongst us? So far from having shown any ability to create a style which would be our own, representing what we at the present time are, so that we could have erected buildings which from the date of the construction could by after generations be pointed out as the brick or stone reflex of those who erected them, we have been apparently compelled to go back for a style which is supposed to represent us as we now are, supposed to fulfil our domestic necessities, and which, bearing upon the front, as many of them do, the date of their erection, may be looked upon by succeeding generations as the British style of the period. But should, in such a case, any of the buildings from which we have borrowed this new style so called happen then to exist, we can conceive how far succeeding generations will be puzzled to account for two styles, or rather two sets or classes of buildings in the same style; but between the set of one and the set of the other a space of time of many decades—let us say one hundred and fifty years or thereabout—existing.

Time enough, one would be disposed to conclude, for those who thought at all about architectural design, and who had studied what ancient peoples had done in it, to have elaborated a style or styles which would in some measure have had special characteristics of their own, the thought given by one generation of designers giving such an impress to their actual work that it would, at least in some degree, be different from the impress given to the work of another generation. If by this practical process we had not by this time arrived at a style of architecture which would have been, if not a reflex of the times we lived in, at least have had an individual character of its own, marking it off from the other styles of architecture much in the same way as the Egyptian was marked off from the Grecian or Classical style, or that was different from the Gothic. But, in place of this, many of the architects of each successive generation elected the rather to copy what had been done by those who had preceded them. The process was easy, for it saved them the labour of thinking. But, unfortunately, they did not always “copy” honestly. Or, if copying was honestly done so far as it went—under the influence, no doubt, of a feeling which seemed to tell them that some mark of their own individuality should be impressed upon their work—they altered their original model, and so altered it that it lost all the dignity of the style, and gave us mongrel products which, in their degradation of art, culminated in the styles (?) known to

students of architecture as "Carpenter's Gothic," or that style (?) to which as yet no distinctive name has been given, but which in like fashion may be designated as "Mason's Classical Architecture." With the present reign another and a better mode of procedure on the part of architects was inaugurated. But while it was copying still, it was better only in this respect, that it was honest copying—thoroughly honest, inasmuch as the practice of copying was based upon a truly conscientious and close study of the old styles, the Classical or the Gothic. This had so far this advantage: that the structures of recent times give, with a wonderful degree of *vraisemblance*, the spirit of the style of the particular class of architecture which the copyists took for their model or pattern. But in so far as a new style was concerned, which would be as much British or Victorian as the Egyptian or the Grecian were reflexes of the minds of the dwellers in the land of Egypt, or of those who dwelt in the "isles of Greece," we were and are as far off as ever. And the most recent corroboration of this truth, which the true artist cannot but characterise as melancholy, and anything but flattering to the abilities of our architects, is the fact that, when the public gave signs that it wanted something fresh (like the Athenians, having a liking for something new), all that the architects could do in the way of novelty—all which they apparently desired to do—was again to resort to the "good old plan, the simple rule," of their forefathers, namely, "copying." But this time they—unfortunately, as we venture to think—selected as the time of their model that "period" which, above all other periods or times of style in architecture, writers on the art had distinguished as that at which the art had sunk almost to its lowest point, namely, the style known as that of "Queen Anne." And, although we might not feel disposed to pronounce a verdict so severe as this against the Queen Anne style of architecture, taking the "Jacobean," following upon the "Elizabethan," as the latest fixed and definite style of English architecture, we would without hesitation place the Queen Anne style far—very far—below it in all the points which should distinguish a style. And yet this, notwithstanding the pronouncement against it of those who were looked upon as authoritative teachers or expounders of the art of architecture, was precisely the revival which the architects of our own day thrust, so to say, upon the people of our own times. It would be difficult to point to a more convincing proof that many of our architects, by their action in this matter, fairly and frankly confessed their inability to design anything of their own which, while it gratified the public desire for novelty, gave also convenience and comfort in the internal arrangements of the house. The only

consolation one has in this matter is that there were, and fortunately still are, architects of standing and of high repute who did not, and will not now, "bow the knee to the Baal" of this architectural revival—men who did not fall in with the popular Queen Anne "craze"; for craze it assuredly was, and one which must have been to some architects and to builders a somewhat profitable one. Appropriate as the Queen Anne style of architecture might be to the times in which it originated, giving in some of its constructive features a reflex of the circumstances under which certain trades then flourished, nothing could be more inappropriate now than it is. Should one of the buildings built in this style recently survive to a period many generations after this, what conclusion could be come to in regard, for example, to the smallness of the panes of glass in the windows of the structure, but one—namely, that at the time when the house was built, the art of glass-making had made so little progress that only the smallest of panes could be made. Yet how far from the truth this is every reader knows. The contradiction to it, no doubt, might be met with in another house quite close to it, built in another style, which we may also suppose to have survived to a period far in advance of this, which would show to the puzzled spectator windows in which the glass was of very large dimensions.

Style in Cabinet Making.

All this has a direct and practical bearing on our special subject, and affords a lesson which, if taken in the right spirit, may be useful to the cabinet maker. The popular "craze" for the Queen Anne style in the house had, as a matter let us say of logical necessity, to be followed up by the craze for the Queen Anne style of furniture and room fittings. And this was logical enough in its way, for then the house as a whole met one of the requirements of æsthetic rule—namely, that everything was in keeping; only that this way, logical as it might be, gave rise to the introduction into the cabinet maker's art of monstrosities, not only of design, but of construction in the furniture and furnishings of the Queen Anne house. So complete was the popular craze, that the dealers in old furniture had commissions to buy up all the old chairs, tables, cabinets, and cupboards which could be found in the kingdom, together with old pieces of crockery and silver plate—those having the craze being determined to make it complete. The only good thing which came out of the craze in this direction was the fact that widows, and those who had "seen better days," who were in possession of such things, obtained high prices, in many cases so high that they wondered what could have made valuable things which they had long looked upon as

nearly worthless, and only treasured because they were associated with the better days of their lives. And when the old but real examples of Queen Anne furniture became exhausted—indeed, long before—we well know British enterprise had essayed to keep up the supply, and, not being strongly impressed with feelings of honour and honesty in the matter, what articles they newly made were without scruple sold as old, the veritable furniture of Queen Anne's reign, and at old and extravagant prices—a style of doing business exceedingly satisfactory to one of the classes, who, as we have said, were not much, if at all, troubled with that rare commodity, scruples of conscience.

How different all this wretched style of "copying" of the works of others, careless whether the copy is fitted for us in the only way in which furniture and furnishings can be fitted, from the true way of dealing artistically and *honestly* with what we have, or rather ought to have, in our houses! Contrast this borrowing system with that which workmen in the olden time designed and constructed for the comfort as well as the embellishment of their houses. Honesty of intent as regards the use and the material, thoroughness and completeness in the making, high because true artistic taste in the design of furniture, were the characteristics of the work done by those who lived and wrought in the olden times, when men took a pride in, and were honestly proud of, their handicraft labours. Whether these be the characteristics of the work done, and the workmen of the present day who do it, we leave the reader to judge, who is practically acquainted with the conditions of the trade as it generally is. That there are exceptions to this most unsatisfactory state of things, both amongst masters and workmen, we most readily, indeed gladly, admit. And it is they who keep the trade and the work it does, not from stagnation merely, but from decay. Masters who will not for the speedy making of money, the enlargement of their profits, barter their good name, as being men who will use the best materials, will do the best work possible, and who, giving to the utmost of their ability by giving due attention to design, will not suffer the public taste utterly to disappear. Men who do their part of the work with the utmost degree of conscientious care, and whose desire is somewhat higher than that which prompts them to wish for the speedy recurrence of pay-day, careless whether they have earned their wages honestly or not. But although there are those fine exceptions, of which we have reason to be proud, the fact remains that there are vastly too many connected with the trade whose characteristics as business men or as workmen are, if not the very opposite to, certainly far removed from those highly honourable ones we have noted.

At the same time, it is only fair and right here to point out that the blame for the existence of such an unsatisfactory state of business matters by no means rests with the masters and their workmen. On the contrary, it is a comparatively easy task to show that the public themselves are greatly to blame, both for its beginning and for its continued support of the system we have been censuring. And this has had its rise in the desire of the purchasers to have *cheap* articles of furniture and of furnishing. This has exercised a most depressing and degrading effect on the trade, and this was inevitable. And it tells in more ways than one, for it not only compels the maker to use poor material, put together in the cheapest of ways, but it also hampers, and in many cases actually puts an effective stop upon, all attempts to give the public pure design. And it is to be much feared that there exists no remedy for this most unfortunate state of matters between the masters or producers on the one hand, and the purchasing public on the other; no remedy but one, and that is a determination on the part of the public to pay a good price for a good article. But it would seem as if this heroic remedy has no chance whatever of being applied. The determination to have "cheap things," even although the usual concomitant of being "nasty" goes along with them, so dominates the public mind, that all hope that it will be succeeded by a higher relation between maker and purchaser does not exist. And the system, thoroughly bad as it is, is unfortunately likely to be perpetuated by the action of those unscrupulous dealers and makers—such as infest all trades—who pander to this desire of the public to have articles cheap, no matter whether they are good or not. And against such dealers and makers, with whom the one thing to be aimed at is to make money, no matter how so long as it is made, all efforts made by the honourable men of the trade to get rid of this incubus, which puts and keeps it down, will be useless. The only cure for the disease would seem to lie in the direction of an association of makers whose members bind themselves not to produce the lower class of articles, which have only cheapness to recommend them, being in other respects, when judged by a right standard, practically worthless. But here again would come in the destructive element always ready to act, created by those "harpies of the trade" who will work at any price, and with any materials and workmanship, so that they make sales. After all that can be said, the true remedy rests with the individual; and this is exemplified by those whose reputation stands at the highest, who will only put out the best work, asking for it not an exorbitant price, but one which gives but a right return for the material, the work, and the design. And it is a cheerful thing to consider—amidst

so much that is depressing and discouraging—that such honourably dealing houses are in the main successful, being well supported by that portion of the public who will not bow the knee to the “Baal” of cheapness, who reason, and reason rightly, that in the long-run the cheapest is the dearest: the only thing to be regretted is that such honourable houses, who will only do honourable because good work, are so few in number. The hope, however, rests with us that their example will be followed by others, till the trade is restored to something like its original condition, when the workers, masters and men alike, were actuated by but one desire—namely, to produce the best work of which they were capable. And this rests with the workmen, as well as with the masters who employ them; for it is obvious that, however desirous the masters may be to give only the best work which can be produced, this purpose cannot be realised unless the workmen they employ are themselves determined to give the best work they can give. And we belong to that class who strongly believe that the high position which this country at one time held, as being the best thinkers of the world, has been largely lost by the workmen as a body having utterly false views as to what work is, what their relation, not only to their masters, but the public, with whom, after all, rests the ultimate appeal, in reality is. It is not so with all; but we can appeal with confidence to those who have a practical acquaintance with the labour question, as it is called, if it be not true that a large proportion—as we think, the majority—of working men hold views altogether erroneous as to what work is, looking upon it as a necessary evil, but still an evil—a necessity of social life to be got rid of if it could; that their opinion of work, of service, is not that it is dignified, but the reverse; and that the phrase “dignity of work, of service,” is one possessing, to them at least, no meaning at all; further, and finally, that the main object of their daily life is to get through with their work as quickly as possible, to give as little and to get as much for it as they can. If such views and opinions are not held and maintained by the majority of workmen in this country, they usually are by large numbers of them.

Now, with regard to their influence upon what is called the trade, it is surely scarcely necessary to say here that they are altogether unlike the views and opinions held and maintained by their ancestors, their predecessors in the trade, who would not have understood them had they been put before them, or, if they did comprehend them, would have shrunk from them as being of the wildest and most dangerous to their best interests as members of the body social. The grand structure, so to call it, of English supremacy in trade

was not reared—never could have been reared—had our predecessors held the view that work was a necessity, but still an evil—that it was undignified. Our reputation, the highest in the world, as being the makers of the very best of everything, no matter what, was created and for a long time maintained by masters and workmen alike taking a positive pride in their work, anxious to do it in the best possible way, eager to maintain their reputation as the best workers of the world. And although one must admit that other causes have been at work which have lowered the proud supremacy of earlier days, have narrowed the sphere of our trade operations, we have created and maintained a host of competitors for trade which had no existence years ago. We are, nevertheless, constrained to confess that a very potent cause in bringing this state of matters into existence is the loss to a large extent amongst many of our working men of that pride in their work which at one period of our national history was the grand characteristic of the British workman. And of this we may rest assured, that the more closely we once more approach the standard of this characteristic of the olden time, the better will it be for our trade. We may talk till doomsday as to the advantages of technical education, and we may, at the enormous cost which it will entail, really give this technical instruction to the great body of our workmen; but it will not suffice to bring back the trade we at one time possessed—had, indeed, the sole monopoly of—will not even save us from the loss of more of it than we have already lost, unless our working men return to the old habit of taking a pride in their work, and doing it in the best possible way open to them. Some of our readers may conclude that we are making too much of this point—exaggerating its importance. But that cannot be overestimated. And in this view we are by no means singular. If readers of this class will but think the point out, they will not fail to see that this principle lies at the very base of success in any branch of work; that without its manifestation and operation work cannot be productive of the highest and best results, must be practically a failure. On the wide resumption of this principle by those who have renounced it depends largely the future welfare of this country. In so far as that has suffered of late years—and of this sufferance there can be no dispute—in so far as neglect of this potent principle for good been overlooked, despised, or wilfully neglected. These remarks are not foreign to, but are connected in the closest manner with, our general subject, and are in every way worthy of the most earnest study of our readers, especially those who are but beginning their business life.

Details of Cabinet-making Design.

We have endeavoured elsewhere to define the term design, what it is, and what it involves—a term which in many cases has been invested with difficulties which do not belong truly to it, and this from a misconception of what design is—a misconception arising, perhaps, not so much from an actual misunderstanding of what the term involves, as from mixing up with the considerations legitimately connected with it others which, if not absolutely foreign to, are at least only connected with it by what may well be called side or collateral issues. Many writers, and some of them having the ear of the artistic world, have discussed the subject of “design” as if it were merely the capability to give expression, by means of drawing appliances on flat surfaces, to certain forms, being arrangements of lines curved and right or straight, and to which the names of ornamental or of decorative parts are generally given. Hence with such the phrase a good draughtsman, or delineator of what are called artistic forms, is employed as if he apparently were a good designer. Now, while the capability to give expression to artistic forms is no doubt absolutely essential to the designer, using the term in its true or legitimate sense—in other words, a capability to draw is necessary to the designer—drawing is no more design than the capability to copy the words—to write them, as the phrase is—of an author is to compose the sentences which give expression to the thoughts of the author. We should be the last—and we think we may claim for ourselves that we are the last—to deny in any way the importance of the art of drawing, the capability to give expression on paper or other flat surface to the forms which have for a time dominated the mind of the artist or the workman. Enough has been given in treating of other subjects in the present series—as, for example, in the companion volume entitled “The Ornamental Draughtsman,” with which is given the paper on “Form and Colour as applied to Decoration”—to show the importance of a knowledge of drawing to all those connected practically with industrial work in which diametric forms constitute an essential part; as an acquaintance with the forms of the written alphabet of any language, and a capability to put those forms upon paper with rapidity—in other words, ability in penmanship—is necessary to the author, thus giving him the power of making a permanent record of his thoughts, which can be appropriated or made his own mental property by any one who can read the written forms. This illustration is good so far as it goes, but it does not go far enough; for the written forms are but a transcript, so to say, of the spoken words, so that if one who reads aloud the written forms gives the same words which the author in

composing his written sentences would have given had he while composing pronounced the words which gave expression to his thoughts, so any one could have written down—as an amanuensis does—those pronounced words, and the written words would be the expression of the author's thoughts. But this is so because certain conventional forms have been devised to mean the same thing when so written down as the spoken words; so that to one who can write in any language it is as easy as it is a certain thing to record the sentences of a speaker who pronounces the words which give expression to the thoughts passing through his mind, and these recorded words can be re-spoken by any one acquainted with the special language employed.

In this supposed case the original speaker is the "designer," so to say, of the sentences to which he gives utterance, the "design" being the thoughts which have been passing through his mind; and any one who can write in the language of the speaker can put down or record the thoughts of the designer or the speaker—that is, give, so to say, the design. And this because the words which constitute the design, so to call it, are made up of letters, the forms or shapes of which by universal consent are always and everywhere assumed to mean, when put together in the form of words, certain words which when spoken are recognised by men who know the particular language which the speaker—the designer, so to call him—employs. But there is no similar process open to the designer who deals with "form" only—artistic form, made up of lines curved or otherwise. For him there is no amanuensis. If he spoke till doomsday no amount of his words could convey to another any conception of what were the forms which he had in his mind's eye. And this for the simple reason that there are no words—or letters which form words—which by every one, if those words were spoken, could be understood to convey the particular form the designer had in his mind. We talk of the "alphabet," and sometimes of the "grammar of form"; but there are no letters—no a's or b's or c's in "form" or shape or configuration—which could go to make up words which, when pronounced or spoken, could convey to the hearer or listener such an idea of the form which the designer had in his mind, that he—the listener—could "put or commit it to paper," so that all who looked upon it could see what the form or configuration was in the designer's mind. He can employ no amanuensis; no reporter can take down his thoughts, or record the forms which have been passing through his brain. He alone can give visible expression of those; he cannot delegate to others a duty which is specially his own—a work which no one can know the elements of but himself. We are

not here forgetful of the fact that there are one or two exceptions to this. Thus, he can say or repeat to some one that in his mind's "design" there was a straight line, and so the hearer could draw a straight line, etc.; and as by common consent certain collocations, so to say, or arrangements of straight lines, are defined as giving forms to which certain names are given,—as, for example, three lines arranged together in different ways give different forms of triangles—right-angled, equilateral, and so on; four lines at right angles to each other give a square; five lines arranged in a certain way form a pentagon, six a hexagon, and so on; so that, so far, a designer of form could dictate to his amanuensis, giving words which would express forms,—so, in regard to curved lines, a certain arrangement of a curved line gives a circle; another gives an ellipse. Thus, to a certain extent, certain words give the key to certain forms; but the extent is so exceedingly limited that it is in the practical work of the ornamental or decorative designer true that there is, so to say, no language of "form" which, having its primary "letters" or configurations, can by an arrangement or collocation of these be made to give, so to say, "words" by which the designer could communicate to others in spoken language an accurate, indeed any, conception of the form constituting the design present, so to say, in his mind. The only way in which he can let others know what his design *is*, is by his own handiwork—by writing down, so to say, what thoughts have had possession of his mind in regard to the lines and arrangement of lines which go to make up his "design." And this putting down on paper or other flat surface is termed drawing, to which, in this instance, the higher and more dignified term of "designing" is sometimes applied. But although this to a certain extent, or considered from a certain point of view, is correct, it in reality conveys a wrong impression; for, as the thoughts of the author constitute his "composition," and the words by which he gives a permanent record to those thoughts are his "writing," or, to be more definite and precise, his "penmanship," so in like manner what in the mind of the ornamental or decorative designer is the arrangement of his lines constitutes in reality his "design," the exposition of this on paper or other flat surface is his drawing of that design, putting it in the only way in which it can be understood by others.

With the musician the seemingly endless arrangements known as airs, tunes, or, in the higher ranges of his art, compositions, are made up of seven notes only. With the author the innumerable words owe their existence to the different and differing arrangements of twenty-six letters only. The combinations of "forms," apparently

as innumerable as the tunes of the musician or the words of the author, forming the work of the ornamental or decorative designer, owe their existence to primaries much less numerous than the primaries or letters of the author, and less than one-third of the primary notes of the musician. For the designs of ornamental or decorative forms, shapes or configurations are only two in number—the straight line and the curved. Indeed, to be strictly accurate, he has only one line at his service, that being the straight, or what geometricians call a “right line.” This statement will very likely be received with doubt by many, while some will deny, as others have altogether denied, its accuracy. But it is nevertheless true. If any line could be considered as essentially different from a straight or right line, it would assuredly be that forming a circle, which, to quote a familiar phrase, “has not a bit of a straight line about it.”

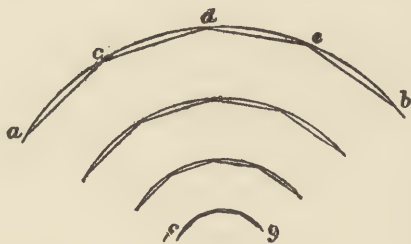


Fig. 1.

Notwithstanding this popular dictum, however, a circle is in reality a polygon, made up of an indefinite or innumerable number of sides of straight lines of infinitesimal length. If the reader will turn to the pages of the companion work in this series entitled “The Geometrical Draughtsman,” he will find this statement demonstrated at length, but for present purposes the illustration in fig. 1 will suffice to verify it. As the circular areas, as *a b*, decrease in extent of sweep or of size, the lines, as *c d*, decrease in length, till in the smallest one, *f g*, they are so short that as straight lines they are scarcely visible, and the line has all the apparent characteristics of what is called a curved line, which in popular estimation is exactly converse or contrary to a straight or right line. For the practical purposes of the designer of decorative or ornamental forms, lines are, however, classed as two in number—the “straight or right” line, as *a b*, fig. 2, and the “curved,” as *c d* in same figure. It is to the combination or relative arrangement of these lines that we owe

the practically infinite variety of forms used by the decorative ornamentist.

Details of Cabinet-making Design (*continued*).

It seems at first sight to be but a paradoxical expression to say that "form" must be accurate form, otherwise it is not form at all. But this statement conveys a truth which is too often overlooked or forgotten, or of which some are wholly ignorant. And the truth lies at the basis of and constitutes true work. For example, the designer may have in his mind a certain definite form of line, say a curve of double and contrary flexure, as *egf*, fig. 2, which is popularly known as the "line of beauty," the well-known painter Hogarth first giving this name to it. Mentally he sees, so to say,

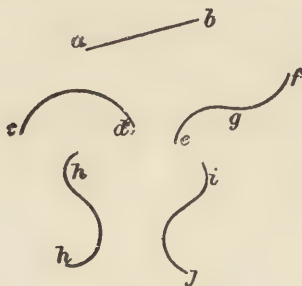


Fig. 2.

this curve before him, and in attempting to create it and give it prominence he draws it. But it is obvious that on the absolute accuracy of his drawing or delineation of it depends the fact whether it is *the* line he conceived of, or another. If badly drawn, it might, to a careless uneducated eye, appear to be exactly like—a correct drawing—but to the educated draughtsman and designer it would be deficient. It would not, in fact, be a true line—not *the* line the designer had in his mind. And the same remark applies to the work of the mere copyist, or the young designer learning to draw accurately. And this accurate drawing is what the young designer is expected to give. Less will not suffice; for, as just stated, it is only accuracy which can give a drawing its true value. If not accurate, however like to the true drawing, it is not the exact drawing required. A false coin may look very like a true one, but,

nevertheless, it is not the coin which people wish to have. The young student will thus perceive that it is not only necessary to have a mental conception of a line, or of the design of a special part; but it is equally necessary, if he desires to be an accomplished workman, able to design as well as to construct, that he should possess the ability to give accurate representations—drawings—of what he has designed. It is not the province of this work to give instruction to the young cabinet maker as to how he is to become an accomplished draughtsman. These he will find in detail in the companion volume in this series entitled the “Ornamental Draughtsman,” with which is associated in the same volume a paper on “Form and Colour in Decorative Design.” But, however he studies

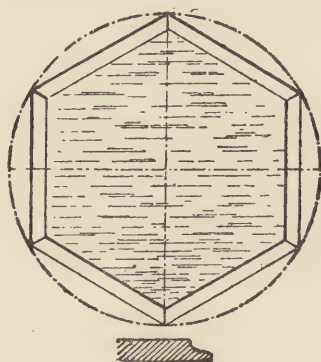


Fig. 3.

the art of drawing, one thing is certain, that his mere study of its details will be of little practical service to him unless he gives also a large amount of practice. And to both study and practice he must “give patient thought,” which is but another rendering of the somewhat celebrated reply of a well-known painter, who, when asked how he mixed his colours, replied, “With brains, sir!”

Designing, indeed, is entirely a matter of thought. The peculiarities of the object which the cabinet maker desires to construct or form is, in the first instance, a matter wholly of mental conception. To employ a well-known phrase, it is with the mind’s eye he sees what it will be or what he wishes it to be when actually constructed; and it is only after he has, so to say, “settled in his own mind” what the article is to be when finished, that his ability to draw, to put on permanent record what he has thought of, comes to be of

essential value. It is impossible to overestimate the value of thought as applied to work of all kinds, and it certainly is not less urgently demanded of the cabinet maker than it is of any of the industrial arts. And in this connection we do not hesitate to affirm that it is to lack of thinking that we owe all the monstrosities in design and all the mistakes in construction which characterise so much of the work of the modern cabinet maker. Need we add that it is in the domain of the cabinet maker who rules his work by the demands of what may be called the cheapening class of purchasers that the worst specimens of the art are to be met with? In this connection some of those who are famous for what is graphically, although not elegantly, called "slop work," may well take up the saying I have already recorded of one employed by the writer of those lines, who, when

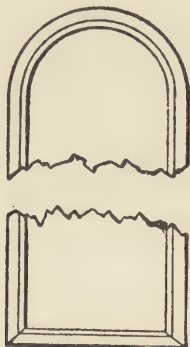


Fig. 4.

it was pointed out to him that such and such a loss would have been avoided had he only given thought to the work, replied, "I am not paid for thinking." On which head we may remark that it would be a good speculation on the part of masters who suffer so much loss both of time and of material through careless workmen, if they paid them handsomely for thinking—a good speculation only, however, if the workmen gave practical evidence that they did think. The giving—the honest giving—of thought to work is that which distinguishes the able, the clever workman, from him who is neither able nor clever; and of all the lessons of the technical school there is none so valuable as that which inculcates on the minds of the pupils the necessity to think of their work—demands that thought shall be given as one of the leading duties of the pupil workman. We fear, however, that there are some technical schools which do

not embrace in their curriculum the science of thought, the art of thinking. The more the pity for those pupils who pass through such schools; and the more the pity for the future of the industrial arts. For, holding as we do—and this in common with the most experienced and earnest-minded men connected with our industrial arts—that one of the most potent factors in the solution of the problem, not how to get back much of the trade we have nationally lost, for that to many appears to be utterly hopeless, but how to retain or keep hold of that which we still possess, is this habit of thinking about our work, so that it will be done in the best possible way, we feel that the more frequently and fully the rising generation of those who will be in one capacity or another connected with our industrial arts are impressed with a sense of the value of thought as applied to work, the better it will be for them, and for our

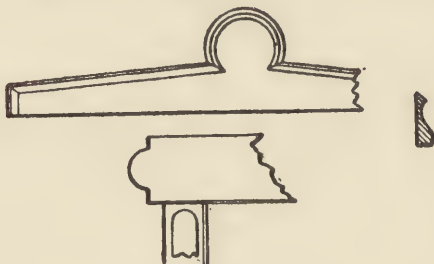


Fig. 5.

industrial arts. There is no mistake more likely to be made, nor one more disastrous to the industrial interests of the kingdom, than this in connection with our technical schools and institutes—namely, that all that is necessary to be looked after with regard to the students is to impart a knowledge more or less thorough of the different scientific and practical points of industrial callings—leaving altogether out of consideration the training of the mental faculties and the cultivation of the moral attributes of men. Whether notice is taken of those or not in the system of our technical schools rests with their masters and governors; but, if neglected, they will assert themselves all the same. We cannot get rid of human nature if we would, and we should be silly if we could. What is to be done is to take it as it is, and do our best to lead it into right channels and secure its high-minded developments. The more thoughtful a man is, the better workman will he be. Such considerations are not outside of our subject, but have the closest bearing upon it, and

are calculated, when properly dealt with, to raise the standard of work everywhere. The more that conscientious thought is given to work the higher will the value of that work be.

Details of Cabinet-making Design and Construction.

We have seen that design and drawing are not synonymous, as many suppose they are—an error which has given rise to great mistakes in practice. They are essentially distinct, although both are necessary to the cabinet maker; for while the mental conception of the article or object of furniture or of furnishing which it is

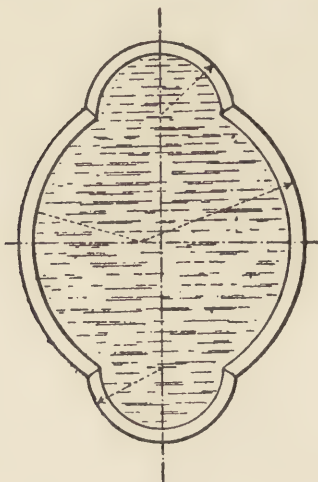


Fig. 6.

desired to make—in other words, the design—is wholly a matter of thought, the knowledge of drawing is necessary to enable the designer to put his design in such a form that the character of the article or object will be seen, and from which when a scale or dimensions are given it can be made or constructed. But while thought is demanded in the department of designing, and must be given if the young cabinet maker has a desire to excel, and possesses the legitimate ambition to be successful in his business, none the less is thought necessary when the actual work of making the article is begun. For lack of quietly and patiently thinking over the various points to be attended to before the article can be said to be well and

truly made, a vast amount in the aggregate of material is absolutely wasted—thrown away, so far as the work is concerned. And when to the value of this is added that of the time necessarily lost when work is thoughtlessly, carelessly done, some idea of the national loss may be obtained—not of the amount pecuniarily of it, for that is not easily calculated, but of the fact which many overlook, or, if taking note of, treat lightly as a matter of no moment—that a heavy loss is sustained by the masters. And although this point is strangely neglected, it is strictly true that all waste is a loss to all, and affects in one way or another every member of the community. The way in which the workman begins to adjust his work, to obtain the best results from the materials at his command, affords an excellent test

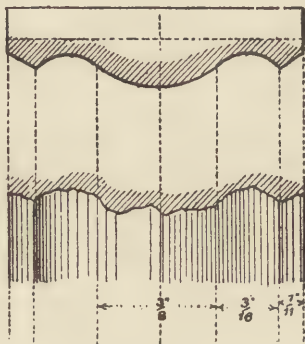


Fig. 7.

at once of the moral character and the technical skill or ability of the man. All material is valuable in the sense that nothing should be lost through wasteful carelessness, which is the worst of all losses that the individual and the community suffer. In some trades the materials used in the doing of the work are in themselves so intrinsically valuable, that a double care, so to say, on the part of the workman is necessary in order to secure the maximum of work obtained with the minimum of material. Cabinet making is one of those trades, for it deals for the most part with materials of a costly kind—costly as compared with the cheaper and readily obtainable timber used by the carpenter or joiner. And yet cabinet makers' workmen sometimes—would it be wrong to say frequently?—go about the work in so thoughtless a way that material is rapidly wasted. For example, while one workman fashions a piece in such

a way that a considerable waste of material is incurred, another workman makes a precisely similar piece, so that little or no waste of material is involved in the process; while in some cases he will do the same work with a smaller piece of wood. And this result is obtained simply by the second workman giving some thought to the work he was about to do, and by which thought he discovered the most economical way of working. Some clever workmen seem intuitively to know the best way in which a piece of work should be done. A glance almost suffices to show them this. Others have to exercise thought for some time before they "see their way" clearly

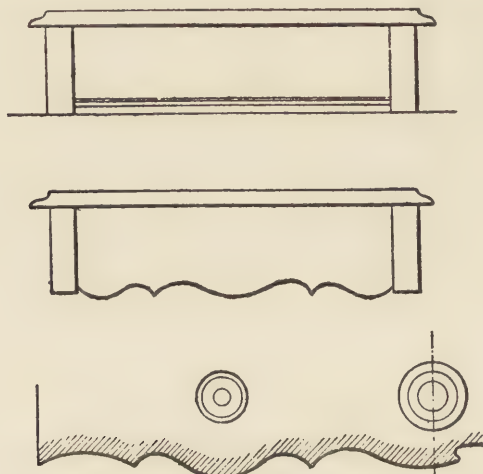


Fig. 8.

as to the best mode of doing the work. Like every other useful faculty in man—memory, for example—this ready way of deciding as to the best way to do work can be cultivated, and should be so by all those whose ambition it is to be able workmen.

It may be a matter of comparatively little importance whether the article of furniture shall be in this style or the other; but in all cases, throughout every department of work, it is of the highest importance that the work shall be honestly done; that it shall really be what it professes to be—good work—for this profession is as readily made by the man notorious for his scamping of work as by him who really does honest work. Work carelessly done is bad enough

for which some kind of excuse or palliation may be offered; but for work carelessly or badly done with intent—that is, for the direct object of getting larger profits—it is difficult to find language strong enough to designate the man who practises it. Scamped work, with which, unfortunately, the public are but too familiar, is remarkably well and most appropriately named; for, assuredly, one who practises it as part of his business—in this case we can surely apply the phrase “legitimate”—looks to it as the prime source of his gains, deserves the title of, as indeed he is, a scamp. Dishonest work

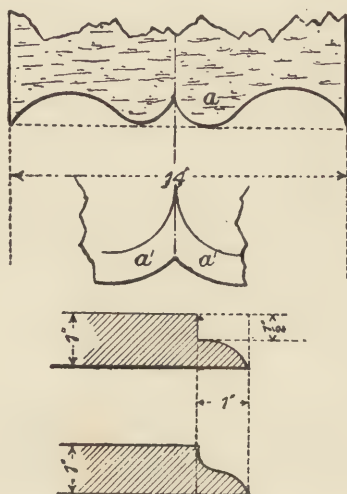


Fig. 9.

disgraces and degrades all who are concerned in it, master and man alike. And assuredly—though *they* may not think about it—it is not the least painful part of the relationship existing between a dishonest master and his men, that the master will be, and is, responsible for willingly and wilfully tempting his men by the bribe, so to call it, of wages; nay, in a measure, through their need of work and its wages, compelling them to be dishonest. This systematic scamping of work has a much closer bearing on the labour question than most think of, and gives the key to the cry of want of work which we too often hear throughout the country. And the trade will never have its right position until we find work honestly

done for the mere pride of it, the anxiety to win and to deserve a good name and to have a good conscience, which is better than riches.

But even where the desire exists to give good honest work, careful *thinking* over its details is not the less, but indeed all the more, necessary. A great amount of unsatisfactory work is met with in households, owing its existence not to any desire on the part of the workman to "scamp" his work, either in the way of giving bad materials or of giving bad work. On the contrary, the articles when examined show clearly enough that both materials and workmanship are good; but the inconvenience arises purely from thought not having been given to the purpose for which the article was to be used, and the conditions or circumstances under which it is used.

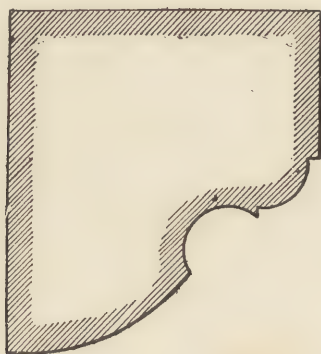


Fig. 10.

In the adaptation of ornamental parts to the decoration of furniture mishaps in the daily use of the articles—inconveniences—are met with but too frequently. The ornament so called is designed with so little thought of the circumstances under which it is to be used, that it is a harbour for dust, and not seldom a trap to catch dresses, or hooks to wound the hands. Decoration can be so designed that, while it really ornaments the piece of furniture, it can be easily kept clean and free from dust without the catching and tearing up of the dusting or cleaning cloth, or, what is worse, the tearing or lacerating of the hands, or affording knobby places, which seem to have an unpleasant knack of coming in contact somewhat painfully or unexpectedly with the knees or shins of the occupants of the room. Couches are made—one cannot say they have been designed, as design implies thought—in which one is to find, so 'tis said, repose,

but so made that repose is impossible; easy chairs which are the reverse of being easy, so uneasy is it to sit in them; and so on through a list of articles which could be made a somewhat long, as it would be a suggestive, one. It is an essential part of true design for the designer to project himself, so to say, into the circumstances under which the articles of furniture are to be used, what the trials to which they will be subjected, and what the usage they are likely

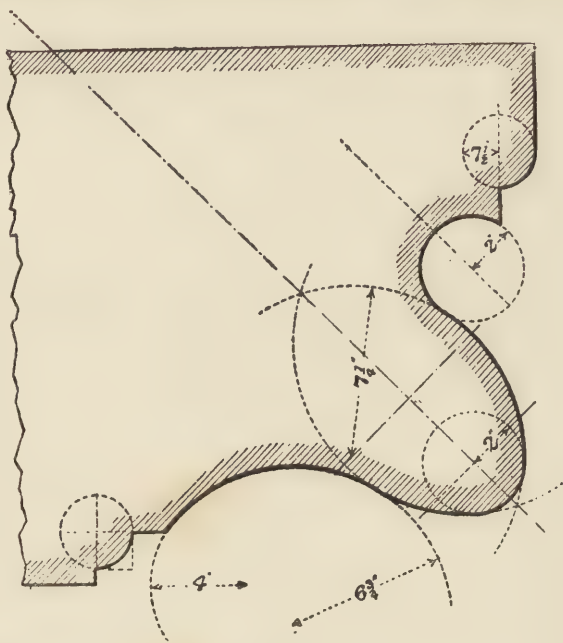


Fig. 11.

to receive—the convenience or the comfort which they are supposed to be able to supply and to maintain. If this looking forward to the future life, so to call it, of articles of furniture, the prescience of and providing for contingencies, were followed up by cabinet makers generally, we should hear less than we now do of the faults found with their work, of the inconveniences, pain, and discomfort (and shall we say temper?) of which they are the prevailing and promoting cause.

Details of Cabinet-making Design.

We have already said that there is no alphabet of cabinet-making design. There is, however, a sense in which it may be said that there is one. This is composed of what may be called the elements of cabinet-making design, being combinations of the straight line and the curved used for certain definite purposes. In one way all cabinet articles may be said to be divisible into or arranged under two classes: first, "parts to be supported"—represented by a table

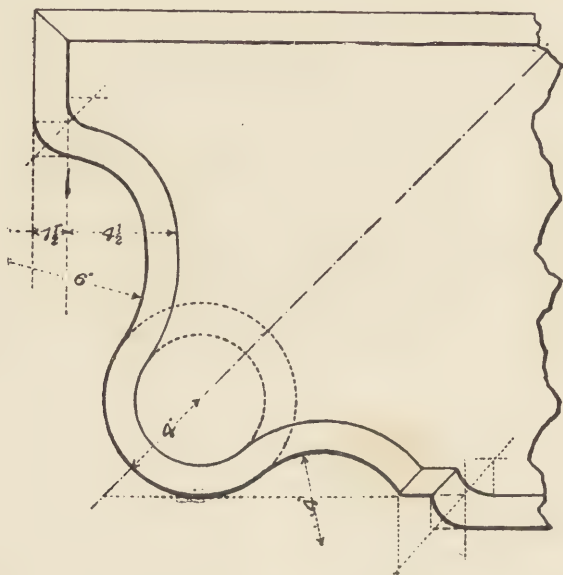


Fig. 12.

top, or definitely the table surface on which things rest; and, secondly, the "parts which support," represented by the table legs, or pedestals, or pillars, columns, or brackets, and the like. To these two may be added a third class—"parts which inclose spaces," as cupboards, wardrobe fronts, or panelled parts, and the like. In one sense this last may be included in the first class, inasmuch as their chief characteristic is surface or flatness, although their office is, as we have said, to inclose spaces, not to support objects, which a table top

does. If the young student will carefully analyse furniture, he will find the characteristic features of the first and third classes to be "surface," and of the second "solidity." Not but what there is solidity in a table top, for example, represented by its thickness; but surface is the chief characteristic, and actual constructive work must possess solidity: that is, must have its essential features—length, breadth, and depth or thickness. But in the class of work we are now considering the idea which the mind forms of the object and which

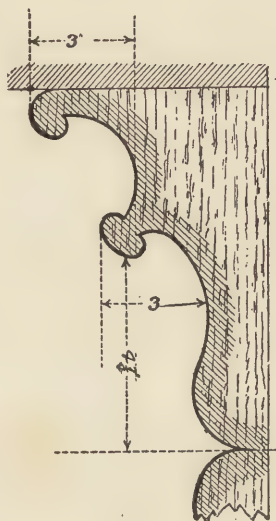


Fig. 13.

attracts the eye is surface—that is, an object which has for its chief characteristic length and breadth only. This is seen in vertical work, of the class such as doors and panelled work of wardrobes, and the like; and in horizontal work, as tables, chiffonier tops, and the like. And in the drawings of the cabinet maker the majority of these give the idea of surface only—that is, of length and breadth only, represented in the plans, sections, and elevation of parts. It is only, or chiefly, in perspective drawings that the three elements of solidity—length, breadth and thickness, or depth—are observable. In the first class of drawings here named, plans and elevation and sections,

a "scale" from which the dimensions of parts can be taken is applicable; in perspective drawings no scale is applicable, save in that class of perspective known as isometrical,—on which points the reader will find full details in the companion volume in this series entitled "The Building and Machine Draughtsman: a Book of Mechanical and Constructive Design." It is in the perspective drawings of the cabinet maker of the objects of the second class, "those which support other parts"—as table or chair legs, pedestals, etc.—that solidity is shown. And for these the absence of a scale, from which all the parts of the object can be measured with equal facility, is for all practical purposes met by simply stating that the drawings are full size—that is, of natural scale or dimensions, or

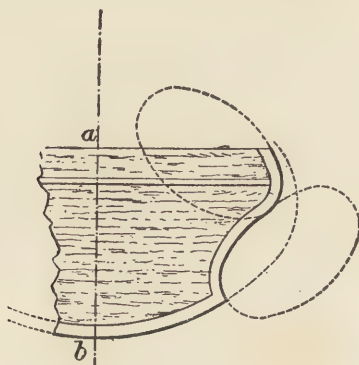


Fig. 14.

fractions of this—such as half-size, quarter-size, etc. And from such perspective drawings the cabinet maker can work. And it is scarcely necessary to say that the work will not only be facilitated, but will be more accurate, if the parts are shown in clear detail, to which end full-size drawings will be of more service than drawings of dimensions sectional of this. Indeed, in some full-sized drawings of cabinet-making work some parts may necessarily—being in proportion to other parts—be so small in size that it may be advisable to give separate drawings of such parts—as, for example, the carved portions—twice or three times the actual or full size. The more clearly the parts are shown in the drawing, the more accurately in actual construction will the parts or details of the design be rendered. And in the execution of carved work the cabinet maker must bear in mind

that objects which are to be looked at from a distance—as the scroll, brackets, cusps, etc., of a wardrobe or tall cabinet at its upper part or cornice—should be carved in a comparatively bold or rough style; all fine work in detail being, so to say, necessarily lost to the eye. It is only when carved parts are to be looked at near or at a short distance from the eye that fineness of detail is desirable and required. In examining much of the so-called carved work of the cabinet maker, it must be confessed that the examination is anything

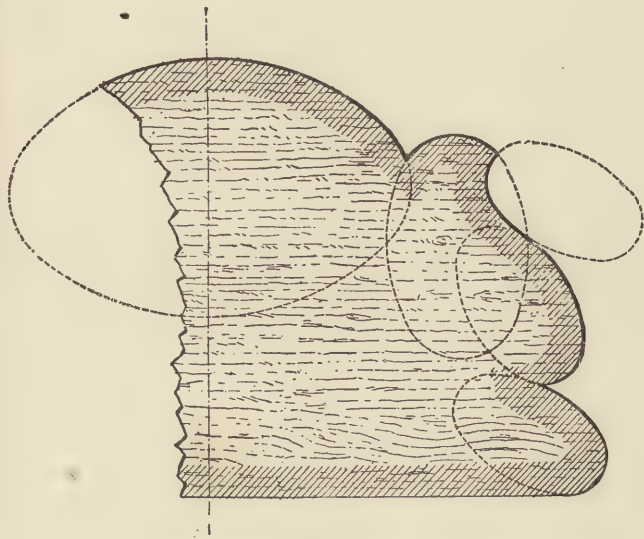


Fig. 15.

but satisfactory. It looks as if the rule or canon above named had been reversed, so coarsely has the work been done, in many cases only the faintest conception of what the workman or designer had in his mind, so unlike are the objects to what he apparently desired to reproduce in his carving. As we have already said, elaborately carved work, with many projecting parts, is quite out of place in articles of furniture requiring to be frequently moved about, or with which the persons of the occupants of the room are likely to come in painful contact. It is only in certain pieces of furniture—such as cabinets, bookcases, and the like—that elaborate carving is admirable.

And in no class of work, perhaps, is the taste of the cabinet maker more clearly shown than in the way in which he dispenses with or, on the other hand, liberally gives carved and highly decorated parts. In the drawings displaying solid parts shading is of great service; as by its judicious use rounded or cylindrically formed parts can be readily distinguished from flat-surfaced portions of the work, while the recessed and projecting parts of the carved work, mouldings, etc., can also be more clearly made out. Many examples of this depart-



Fig. 16.

ment of drawing are given in the plates of the present volume—of which, however, we deem it right to state that the drawings in these plates have not done justice to the way in which the original drawings were done. Notwithstanding all the improvements—and they have been both numerous and important—made of late years in the way of reproducing artists' drawings for printing or book-illustration purposes, it must, we think, be honestly conceded that no system has as yet been introduced by which the fineness and delicacy of shaded drawings done by competent artists can be given in the printed facsimile. This latter term cannot, indeed, be strictly applied

to such reproductions; facsimiles of form no doubt they are, but not facsimiles of the delicate and accurate shading and effects of light and shade. On the other hand, it is only fair to state that improvements in book illustrations are being produced almost daily, and some have been used since the period at which our illustrations were executed; and we incline to the belief that improvements of such a character will yet be made as to give the artist the assurance that what he has produced on paper will be so faithfully reproduced on the blocks used for book illustration, that they will be positively facsimiles of his work in shaded effect as well as in form or outline.

In the preceding paragraph we have stated that there is in a sense an alphabet of the forms used by the cabinet maker in his

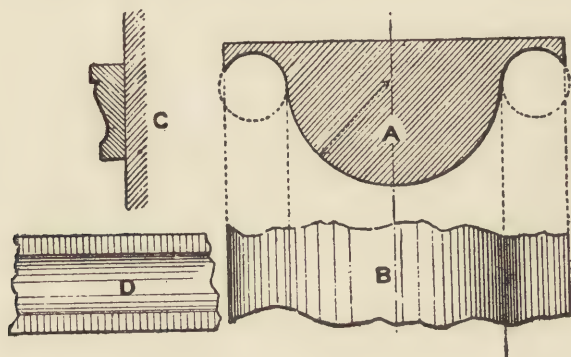


Fig. 17.

work, which, while they cannot be described in words, can be represented by drawings. There are, as we have also stated, but one or two exceptions to this general statement—as, for example, the forms known as the triangle, with its different classes, as the right-angled, the equilateral, etc., the square, and the different kinds of polygons, as the hexagon, octagon, and the like, and the circle and the ellipse, or oval and egg-shaped figures. These, when named, give to the educated draughtsman at once the conception of the form desired, and he can in his drawings produce them. But with all other forms our statement holds good, that the forms of the cabinet maker must be shown in drawing before the mind can have an intelligent conception of what they actually are. The alphabet of such form as alluded to is made up of what may be looked upon as the elements

in which surface—not solidity—is the chief characteristic, these being all taken from actual work, as adapted to special purposes, and which the young cabinet maker will be able to apply to the like or to similar purposes, such as the requirements of the work he has in hand may suggest.

As the comparatively few letters of the alphabet and the still fewer notes of music are capable of giving a practically endless series

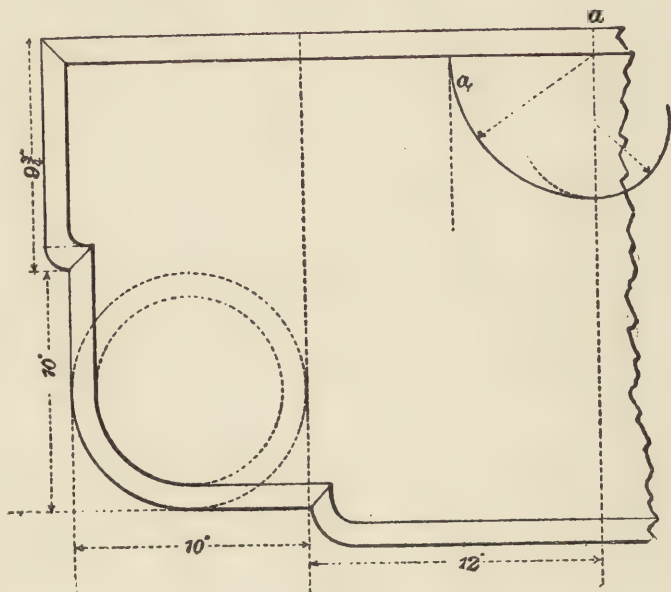


Fig. 19.

of combinations, so also do the lines of design or of drawings, although but two only in number, in the hands of the designer and draughtsman give an infinite number of combinations. It will thus be seen that there is no possibility of giving to any so-called "alphabet"—or, as some designers have called it, the "grammar of form"—definite and precise limits. Any set of designs, however full in example and apparently complete, can at the best be considered only as a contribution to cabinet-making design or ornamental forms useful for decorative purposes—a contribution which, although

the young designer, enabling him to arrange other combinations of lines. In giving our examples it is not easy—if, indeed, it be possible—to arrange them in anything like a positively accurate sequence; the arrangement, however, which we have adopted will, we trust, serve all practical purposes. Figs. 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12 are flat supporting surfaces, as table tops, washstand or dressing-table tops, and lower boards or shelves. Figs. 13, 14, 15, 16 are enclosing panels or boards, or pendent pieces placed at the top of the open-faced recesses in the centre of dressing-tables or washstands, and may be used for other purposes. Fig. 18 is a plan of bottom table or lower shelf of a washstand. Fig. 17 is an elevation of the back slab of the washstand. Fig. 19 is the plan of the upper table of washstand. Fig. 20 is end elevation of the washstand. The plates accompanying will afford the pupil designer a fairly large selection of subjects.

END OF "CABINET MAKER."



ORNAMENTAL WORK IN MOULDINGS.



ORNAMENTAL WORK IN MOULDINGS.

Introductory.—Beauty in Form.

THE term "design" is commonly employed to convey the idea that in anything which is constructed or made, the principal motive for and ultimate object of which is to subserve some purpose of obvious utility, there is something added to or superimposed upon the materials which in the aggregate form the object constructed. This addition has for its direct and some say its only object, to please the eye, or as others express it, to gratify the taste. In other words, while the main object or body depends upon the rules and principles of construction, this added quality comes within the domain of what is now so frequently talked of—namely, æsthetics. The necessities of the case compel, as it were, the definition we have here given; but on consideration, and as will be fully illustrated hereafter, it will be seen that this quality in an object which pleases the eye or gratifies the taste does not always result from, or is not always created by something which is added to a constructed body. For that body in itself, that is, in its lines as taken in by the eye, may present the quality we have named; and the mere looking at it will give that pleasure or gratification to which we have alluded. This may be very familiarly illustrated by a jug or vessel to contain liquid. This article primarily comes under the designation or class of a constructed article specially made. And it may be so made that it will completely enough serve its main object—namely, to hold or contain a certain quantity or volume of water, so that it may be confined and be carried from place to place. But this enclosing or containing space of the jug or vessel may be of any shape, and this internal shape may—and as a general rule does—give the external shape or outline, or what in the language of technical design is called its configuration or form. But this may be such that it does not please the eye when looked at; in other and ordinary words, it is "ugly," and this in various degrees, from the state or condition

which men say is "endurable" to that which is strongly denounced as "hideous." But it is also as obvious that the shape, outline, configuration, or form may be such that every line which gives this is in itself pleasing to the eye, and the whole or aggregate gives an object to which the term "beautiful" is applied. This sense or appreciation of what in the simplest language (which at this stage of our paper we purposely use) may be called "the look of the thing" or object, seems to come instinctively or intuitively to men. Even although what is called, for lack of a better and more specially distinctive term, "taste" may not be cultivated, one can tell at a glance that one form or shape is what they say is "ugly"—that is, that it does not please the eye or the mind, or rather both; and that another form or shape is pronounced to be "beautiful"—that is, that it is pleasant to be "looked" at. But while as a rule this is true of most men, they cannot with equal facility state explicitly why they pronounce or give their reasons for deciding one form to be ugly, the other beautiful.

Difficulty in defining what is Beautiful.

Nor do those who offer no pretence, even of the slightest, to the possession of what is cultivated taste, stand alone in this inability to give a reason for their believing one thing to be beautiful when looked at, another the reverse of this. For even those who do not require to pretend to the possession of cultivated taste, but who have it, are by no means able to give an explanation of what in reality distinguishes the beautiful. No two are found to agree upon a definition of the term "beauty." Nor is the reason for this indecision or incertitude far to seek. It finds expression in the common saying "tastes differ." And beyond what this saying leads to we cannot in reality go. For what appears to one eye pleasing is to another anything but this; so that opinion as to the beauty of a thing ranges through a series of gradations as numerous as the individuals who may be exercising and expressing their opinion about it. But while this diversity of opinion exists as to a specific definition of the term "beauty" or "beautiful," or this inability on the part of most of us to give a reason why we think the "look" of a thing as this or as that, there is, fortunately for the Ornamental Designer, a very decided agreement amongst all varieties of men thus far. Namely, that there is such a marked distinction between forms, shapes, or outlines which objects possess, that certain of them are pronounced without hesitation to be ugly—that is, not pleasing to the taste: instinctively men know them to be such—while others, on the contrary, are said to be, if not beautiful, taking their own notions as

the basis of their definition of the term, certainly not unpleasing to them. Take any object, and ninety-nine out of a hundred who are looking at it will pronounce it to be "pleasing," to be "nice to look at," to "gratify the taste," to be "pretty," to be "beautiful," to be "æsthetic." All these modes of expression convey in reality the same meaning, and that, more by way of having a definite name than from any agreement that it means a definite quality, men have agreed to call by the name of "beauty" or say that the thing is "beautiful." Even the one hundredth who may stare stolidly at the object which calls forth a decided expression of some opinion from his ninety-nine fellows, and be quite incapable to find a word or words to convey the fact that the object has made any impression on his mind—should he possess this, which is under the circumstances doubtful—feels nevertheless a something, to which if he could give a name it might find a positive expression in one of the terms above used, that it was "nice to look at"—probably qualifying this with "enough"—"nice enough," or more negatively by "It ain't ugly," or, "It's good enough."

"Æsthetic," a Term used in connection with Artistic Industrial Decoration.

We have used the words "taste," "æsthetic," "look," "form," "design": it will be well to examine these, as we may from their inner meaning arrive at something definite as to the ideas they convey, and thus they may be useful in making clear sundry practical points of some value in connection with the important subject which will for some chapters engage our attention. One of those words just named is at present used everywhere, and as we might say at all times, whether or no it be the fact that those times are always appropriate. The word which is, in fact, while we write, a popular "rage," or "craze," is "æsthetic." When many use the common phrase the "look" of a thing, those who indulge in nothing that is to their mind common, and are always mouthing about things being "æsthetic," little think that the commoner, or as they will probably term it the "vulgar" expression, and the much grander sounding, or in their language "muchly fine" one, mean precisely the same thing—that is, if they will admit that words have a meaning, which from some they use plain people would be apt to decide that they think they have not. The term "æsthetics," then, is derived from the Greek word *αἰσθητικός* (*aisthetikos*), and this from *αἰσθάνομαι*, to perceive. This word again comes from the Latin words *per*, by, and *capere*, to take, receive or obtain. And this taking or reception is effected through the medium of the senses. By the sense of seeing we perceive what an object is; we have or obtain the perception

of the "see-able" peculiarities of an object. In other and plain language we look at it, and from or by the sense of seeing we have a perception of what we call the "look of the thing." Thus the external peculiarities of an object are those which can be seen, so that æsthetics may be defined as the science of looking at objects, or that connected with the look of things. As plain language is not generally considered dignified enough to be applied to a science, æsthetics is therefore defined to be the "science of the beautiful in nature and in art," or as some prefer to call it, with a happy combination of the common and the dignified form of words, the "science of taste."

"Taste," a Term used in Industrial Decoration.

The compilers of some, we might say not a few of the older, or shall we say the very oldest of dictionaries, had a method of considerably lightening the labour of their drudgery (by the way, it is worthy of noting here that the grandest and most honest of the fraternity, brave old Samuel Johnson, gave as one of the definitions of a "drudge," the "compiler of a dictionary") by printing after a word of which they themselves did not know the meaning, "See so-and-so," and when you referred to so-and-so, the same formula was repeated and you were sent back to the point you came from. This see-saw "so-and-so" system, although mighty convenient for either the ignorant or the lazy lexicographer, was anything but so to the thirster after knowledge of words. We in this case do not intend to imitate the old compilers—by saying "Æsthetics—see Taste"—and at "Taste," "see Æsthetics." We have given as one of the definitions of æsthetics that it is the science, or philosophy, of taste. Now, what is taste? This word is derived, according to some, from the French *tater*, to feel; to others, from the Norman-French *taster*, to try, and means to perceive a thing, not, as already stated, by the medium of the sense of seeing, in which the eye is the power, but by that of the palate, in which the tongue is the power. In common language 'the perception (see the last paragraph on æsthetics) of the qualities of an object through the medium of the tongue is called "tasting a thing," just as the perception of the qualities of an object through the medium of the eye is, as we have seen, the "looking at a thing." But how comes it, the reader may ask, that if all this be—and it is—so, the term taste is so applied, that æsthetics is defined to be the science of taste? What has æsthetics to do with eating, the refined to do with the vulgar? Some who are sarcastically inclined might find an answer to the question in this fashion. Man has been defined in divers ways; amongst

others he is said to be a "cooking," and therefore "an eating animal." For the only object of cooking is to eat what is cooked. And as a man must eat to live, eating, whether he "cook" or not—for he may eat things as he gets them from nature (hence, by the way, the French term *au naturelle*, without any cooking additions, as sauces or the like, at all)—is therefore the primary, the essential work of life. When he eats he tastes: with cooks tasting is an essential part of their art, and the terms indeed are often taken to mean the same thing. And we can conceive of a state of early society when eating was the main, the only object, of living; for a man would only work that he might get something to eat—what he would call his "living"—the only thing, in point of fact, which constituted life in those, the dark ages. In this bygone condition of society a man of great experience in eating would therefore be called a "man of taste,"—and the expression would be from generation to generation handed down to modern—which, of course, being, as some at least say, refined times, the ideas conveyed by the term "taste" only have relation, not to the vulgar act of eating, but to the higher things in nature and art. Thus the science of taste would *par excellence* be so confined, having nothing to do with taste in its literal meaning, in which the tongue only was concerned. This may or may not be the way, according to our assumed sarcastical authority, in which the word taste has got to have such a very limited meaning; so that the high compliment paid now-a-days to one who is said to be a "man of taste," has quite another meaning from that which it had in the old vulgar times when eating and therefore tasting was the great object of life. Hence it may have come about that just as eating, being the highest object of material life, was called taste, so those who deemed that contemplation of the beautiful in nature and in art was the highest object of intellectual life would appropriate the distinctive term. The great probability is, however, that such is the derivation or origin of the term. Be all this as it may, and however it came about, the term "taste" now refers, and almost wholly refers, to the cultivation of the beautiful in art and in nature; although, adhering to its derivation, taste literally means the perception of a thing through the medium of the tongue.

"Beauty," "The Beautiful"—Terms used.—Derivation.

But accepting this more remote and restricted meaning of the term taste as concerned only with matters of the beautiful, we still are met with the question, What is the beautiful?—one which we have seen, not only from what has been said in this, but in the paragraphs of the work entitled "The Ornamental Draughtsman," has as yet received no

no precise definition accepted by all. Looking also in this instance at the inner meaning of the term, we find that the word "beauty" is directly derived from the French *beauté*, from *beau*, good or fine, and this again is based on the Latin *bonus*, good. To *beautify* is to make a thing good, from the above French word *beauté*, and the Latin verb *facere*, to make. A beautiful thing is therefore that which is *made* beautiful either by nature or by art; and although literally meaning goodness, beauty is defined with general acceptance as signifying that which possesses properties which please the eye or gratify the mind—but another way of stating that the thing is good. Now, what is good in this sense in the eyes of one may not appear to be so in those of another. Hence the diversity of opinion as to what is beautiful and what is not. So that the position is just this: that in any art which attempts to *make* (see above as to "beautify") a thing beautiful, the decision as to the result will be altogether determined by what the individual or the artist deems to be good—that is, derived from and influenced by his ideas of what beauty is, or what constitutes the beautiful.

And this estimate of beauty which the individual forms must be based on the results of his observation. He himself may aver that his estimate of what constitutes the beautiful is derived from or based upon some theory of his own, more or less metaphysical; but it will nevertheless be found, in tracing the matter up to its source, that it is really based upon observation of objects around him. This observation may be partial and defective, or it may be full and accurate; but whether the one or the other, it is that which supplies him with the material, so to say, by the use of which he gives expression to his work, of whatever kind it be, of *making* a thing *beautiful*. And this work will be beautiful to a class either numerous or the reverse in strict proportion to the width and fulness of the range of his observation, and upon which he founds his conception of what is the beautiful. The artist, like any one imparting, can only give what he has got; and in this matter what he himself possesses is dependent largely upon the way in which he has availed himself of the stores, so to call them, of the beautiful at his command. And beautiful things, acknowledged by all to be such, abound in widest diversity of endless profusion all around him, both in the productions of nature and of art. Chiefly, however, in the former; indeed, we may say wholly, for all true beauty in art is derived from a just conception of the beauties of nature, for it is in nature that all forms exist. Her combinations of those are as endless, as the fields in which they are presented are widely spread and numerous. Whatever be the results of the lessons one receives in art, the teacher,

in the first instance, must be and always is nature. This does not preclude, on the contrary it invites, attention to the teachings of art; and all high art admitted to be so on all sides is based upon the teachings of nature.

Endless Diversity of Form in Natural Objects.

We say that the forms found in nature are endless; so also are the combinations of those elements of what is beautiful in nature and in art. The colours in which those forms are, so to say, draped or clothed, are also endless in their variety and in their combinations.

It is with form, however, that the ornamental designer has to do. And the form or shape, or external appearance presented by the object, is made up wholly of lines. And whatever may be the characteristics of the surface of the body, whether it be flat or rounded, or whether in either of those cases the flat or rounded surface be left smooth, or whether it be cut up into hollows of diverse kinds, giving rise, consequently, to what will be projections, and the shape of which, and their relation to each other, giving rise, as it may be, to what is called ornament; or leaving only indeterminate projections and hollows, which are known by the name of rough,—still, however treated, the surface of a body must be enclosed by lines, and those enclosing lines have, in the aggregate, the term “outline” given to them. The truth—that every object, however complicated it may appear to be as regards its form, shape, or configuration, is, must be, made up of lines—must be accepted by those who for the first time take up the practical work of ornamental designing. There are, and can be, only two classes of lines—the straight and the curved.

Work of the Ornamental Designer.—Meaning of the Term “Ornament.”

It is, then, with ornamental outlines the ornamental draughtsman has to do; or rather, we should say, his work is to give to constructed bodies which are in themselves plain an ornamental appearance, which appearance or look is derived from the combination of the two classes of lines we have named, the straight and the curved. Every one knows what is meant by a plain body or surface, this being bounded by straight lines, and the surface itself left in what is called its natural condition. In construction purely as such, this plain body may serve its purpose admirably—that is, it is possessed of utility—but while this is true, appealing only to the sense of propriety, fulfilling thus the conditions of correctness, it makes no appeal to what may be called the higher faculties. No one disputes the fact that it has no pretension to beauty, no matter what the standard may be by which beauty is defined—no standard applies to

it. But it will at once be seen that without in any way interfering with, or lessening in any degree, the value of its constructive utility, we may by altering its enclosing lines, and by treating its surface by cutting it up into lines and hollow spaces, impart qualities to it wholly different from those which it before possessed. When we so treat a plain body we are said to "ornament" it, and ornament means simply a thing adorned—from the Latin *ornare*, to adorn. We have thus attained to or reached a point at which, while we do not interfere with the usefulness of a constructed body, we give an added value to it, by imparting to it a quality which pleases the higher faculties of what we have shown to be now known universally as taste. We have still construction, but we have got it graced or adorned; so that we have a new subject, "adorned construction," or, to revert to the derivation of "adorned" from another name, we

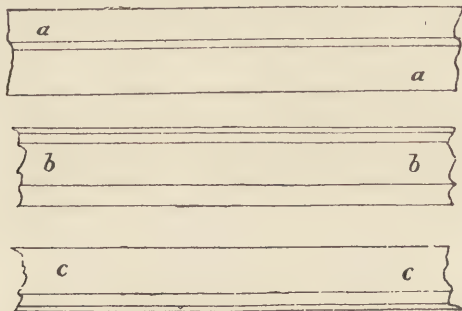


Fig. 1.

may call it "ornamented construction." And we may here note that to distinguish the term "building," which primarily concerns itself with pure constructions of utility, from "architecture," which obviously subserves some purpose other than that of usefulness, it has been by some proposed to define architecture itself as "ornamented construction." And as material is used in construction, the art so defined would embrace the wide range of material at the command of the handicraftsman.

Ornamented Construction.—Simple Illustration of the Term, based on Moulding Design in Surface Decoration.

In applying, then, the broad principles now but briefly indicated, it does not enter into the scheme of the present series of paragraphs to give detailed statements as to this or that theory of the beautiful, nor to give what some call the "canons" or rules of art, which others

do not admit to be such; we shall simply accept such outlines or forms as are considered by authorities based upon sound observation of nature in her varied and ever-varying forms; from which, as we have seen, all form must be primarily derived. And it will well illustrate the principle upon which the practice explained in succeeding chapters under the present title is based, while it will enforce some of these points we have been attempting to explain, if we give here a simple illustration showing at a glance what ornamented construction means, and how it is attained in "Mouldings."

Thus the beam (as *a a*, fig. 1), stretching across an opening, sufficiently fulfils its duty in supporting the superincumbent mass if it be plain throughout—all that is required absolutely for utility being that it is strong enough to bear the weight, and sound enough to keep bearing it for as long a time as possible—the longer the better, of course. But thus placed, it attracts no notice; the passer-by gives it but a glance, if he even gives that, and if looked at at all, the only mental satisfaction it gives is that it looks strong enough to bear the weight put upon it, and sound enough to bear it long without giving way. But that plain surface of wood may be so adorned by the cunning hand of the carver artist, that children stop to gaze up at it with wonder, men linger long below it to study it with delight. Fig. 2 will illustrate in a simple way how ornament can be added. Here, whatever be the opinion or criticism as to the value of the ornament as such—although both examples are from established practice—there will be no dispute as to the fact that the objects, or beams, as in this instance, in fig. 2, are more pleasing to the eye than the beam *a* in fig. 1. Although the ornamental lines in fig. 2 may not come up to the standard of some particular theory of beauty, it will be at all events conceded that they give some satisfaction to the eye—that they "look better," as the phrase is, or to use the fashionable word, they are more "æsthetic," than the plain surfaces in *a a*, fig. 1. Figs. 1, 2, 3, 4, 8, 9, 10, and 13, Plate I., convey beyond all doubt the idea that "mind" of some kind or another has been bestowed on the work; but the form as illustrated at *a* in fig. 1 might have been put up by a savage who had only so much skill and such tools as to give a flat surface to his beams. Fig. 1, at *a*, p. 108, represents "construction"; the three sketches in fig. 2 represent "construction adorned," or, as we have already seen it named by some, "ornamented construction." Figs. 2, 4, 9, Plate I., and figs. 1, 2, 3, 8, and 10, Plate II., are given here as further illustrating the point so far as surface decoration is concerned—those being in a kind of ascending scale, reaching what is in point of fact a high stage of ornamented construction.

Ornamented Construction further illustrated in Connection with the Sectional Forms of Beams.—The Characteristic Feature of Mouldings.

But the beam may not be so created ornamental in surface in the way indicated in preceding paragraph. It may be so placed, in projecting from the surface of the wall on which below it rests, or to which above it gives support, as to show an outline of the very plainest, on the part so projected or coming forward. The beam in this instance attracts no attention, unless it be to find fault with it that it projects at all, its plainness being thus made all the more obvious. But that outline may be so altered that grace is given to it by the lines, as in the different diagrams in fig. 2, which are supposed to be end views, or what constructionists call cross or transverse sections. And simple as the outlines are, still when in

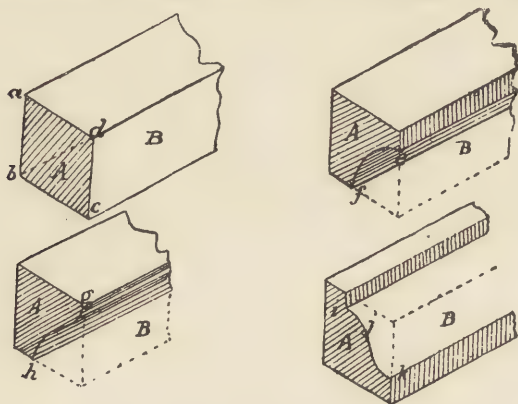


Fig. 2.

place, and put under the effects of sunlight and the shadows which this produces, looked at along its length, or without a "full-face view," it may become beautiful. All the more so when the "tooth of time" aids Nature—not the sooty smoke of crowded towns—in imparting those delicate shades and tones of colour with which, while she conceals the ravages of time, yet adorn and dignify them.

"Mouldings"—"Moulded."—Brief Glance at some of the points involved in these Technical Terms used in Building Construction.

By thus giving a changed or changing form to the otherwise flat surface of a beam or a block, we have a series of surfaces to which the term "mouldings" is given—and when given, the objects are in technical language said to be "moulded," or "molded," as some

prefer to write or spell it. That they in using the last form of the spoken word have departed from the true meaning of the word, is held by some; it is doubtful, however, whether this be so if we look, as we now shall, at the derivation of the term. The word "mould" is generally applied to the matrix in which an object is cast; the two words "mould," "matrix," being interchangeable in common language, although the first is that most generally or popularly used. The interior of the matrix or mould is made with certain lines, so as to give the definite form desired; and the material which is poured into or pressed into the interior in a molten form, as a metal, or liquid, as fluid plaster of Paris or gutta-percha, is said to be moulded, more frequently "cast." If the material be not fluid, molten or melted, but soft, such as wax or plastic clay, and is pressed into the matrix or mould, the term "cast" is not or ought not to be used, but the term "moulded." Casting is associated with the pouring, or as the technical term is, "running in" of a molten or liquid substance,—moulding with pressing or forcing in; in both cases a matrix being used. If the word "mould" is derived from the French *mou*, which means soft, the spelling of the word "moulding" is correct,—if it be from the Icelandic *Mold*, the Latin *mollis*, "soft," or the Spanish *molde*, giving it as "molding," as used by some, is right. *Mold* in Icelandic means soft earth or soil; and the reader will perceive that this quality of softness associates itself better with the pressing of a soft plastic material into the mould or matrix, than with the running in of a molten metal or of a liquid substance afterwards capable of hardening into it. The French technical word equivalent to our "moulding" is *mouleure*.

When an object is treated through the medium of a matrix or mould, as above stated—this latter being of a fixed or indestructible character, so that it can be used repeatedly under a succession of "runnings in" or of "pressings"—it conveys the idea of a permanent character being given to the "form" which the matrix or mould impresses upon the material operated upon. This involves also the power of reproduction or repetition, so that when once a matrix is made we can get any number of "moulds" from it we choose to have, so long as the matrix remains perfect. Popularly, moulds are termed "casts," and with this term is always associated the idea of an established, or what is called stereotyped, form; this latter word, indeed, involving the idea of moulding or casting, and meaning literally a *solid* (printing) type run or cast from a liquid metal poured into a matrix (*stereos*, the Greek for solid or firm, and *typos*, a type). Hence some maintain that the term "moulding" means simply established or generally received forms or outlines used in the

decoration of the objects employed in building and the other constructive arts. The reader must decide between the conflicting claims of the two definitions.

But whether moulded by the pressure of the hand operating upon a plastic material forced into a mould, or whether made by casting or running in molten or liquid substances into moulds, the result in either case clearly carries with it ideas of a *mechanical* process. Mind, no doubt, must have been given to the formation of the lines of the matrix or mould; but once that was given and the matrix made permanent, any one of almost the lowest intellect could get a repetition of the moulding or cast object, so that a number being used in separate cases, each user might profess, if not honest, to have originally designed it; while in reality his use of it would in no way have called out his intellectual faculties to design it, further than the mere pouring into the matrix or mould of a liquid, and finally hardening or "setting" or pressing into it a plastic material. And although, for obvious and convenient reasons, we have a series of established "mouldings"—technically so called—and adhere to their use in their established or stereotyped forms, the reader will perceive how not a few of our highest authorities object to the continued use of those established or stereotyped forms, or rather we should say the constant use of them. And this on the ground that, having them ready to hand, our artistic workmen—so called—have no necessity, at least none of a pressing character, to put forth their own artistic powers in the production of form or "contour" for solid objects, thus giving their evidence of their own powers of design. There is very much of an important principle involved in the point here raised, and as it affects in reality the status of design amongst us, it will afterwards, in this paper or in one or other of the companion papers, in some fashion occupy our attention. Meanwhile, taking the "mouldings" as established, and affording, as they unquestionably do, beautiful "contours," we shall in the course of these chapters explain the peculiarities of the different classes, with their individual members, and generally give instructions how to describe them so far as our space will permit.

"Contour" a Term used in connection with Mouldings in their strictly Technical or Constructive Sense.—Some Points connected with it.

We have used the word "contour" more than once as applied to the form of a moulding or its outlines. This term is derived from the French word *tour*, a turn, and prefix *con*, with. This at once shows that the outline of a moulding is formed of a turned—that is, a curved—line or lines. Strictly speaking, this is not so, for

several parts of mouldings are made with straight lines; but as these are connecting parts only, strictly subordinate to the leading parts of the moulding, formed of curved lines, the term "contour" is generally applicable to a moulding. It is the giving of those lines which constitutes the art of drawing mouldings. And as most of the contour can be shown by parts of circles, moulding curves are said to be "described." We shall see, however, that mouldings, taking the various forms which are generally used, are of two great divisions, which may be respectively considered as the high and the low classes of "moulding design." The curves of the one are, as we have said, "described" by parts of circles—those of the other are "drawn." In the one we can make use of certain appliances or implements, so that the process of producing mouldings may be thus said to be mechanical; in the other all mechanical aids are discarded, and the skill of the hand aided by the accuracy of the eye are alone trusted to.

If the reader has attentively perused what, in the volume entitled "The Ornamental Draughtsman," has been said on the art of drawing, and also in the early part of the volume entitled "The Building and Machine Draughtsman," he will have no difficulty in deciding which of these methods of obtaining the lines of mouldings, named at end of the preceding section, are in the domain of what is called "high art." The "contour" of a moulding is that view of it which is shown in what is technically called a cross or transverse section; or is looked at, in popular and graphic, if not strictly correct language, "end on." It is obvious that the exact form or outline of the curved parts, and their relation to and connection with the subsidiary or joining parts composed of straight lines, can only be seen when the moulding is looked at in this direction. An examination of a moulding looked at in a point directly in front, or in "elevation," as the technical phrase is, would not give this precise information as to its formation. The term "profile" is also used to denote the outline or look of a moulding as looked at "end on" or sideways. This term is derived from two Latin words, *pro*, for, or *per*, by, and *filum*, a thread or line, and has come to be understood as a side view or elevation of an object; used only as a single word, it means the side view of a human face, or a portrait in side view. In fig. 2 the terms we have used above are illustrated—the part A in all the four diagrams being the cross or transverse section, the "end-on" view or elevation, the "contour" or the "profile"—and to indicate that it is shown as a "cross section" it is cross lined, or, technically described, "hatched," as in the fourth diagram. In all the diagrams in this figure (2) the parts marked B are what are called an "elevation" or

"front view"—an end view being generally termed an "end elevation," a top or a bottom view, looked directly down upon or up at, a "plan."

"Profile," "Assemblage,"—Terms used in connection with the Technical Work of Mouldings.

It is right here, however, to state that the term "profile," although accurate enough as a distinctive appellation for the look presented by an end view or cross section of a single moulding, is most generally, if not most correctly, applied to a number of separate mouldings, which is usually designated as an "assemblage." Thus, in fig. 2 *a b c d* is a single or separate moulding, so also *g h* and *e f*; but at *i j k* there are two mouldings of different contour, and the whole as

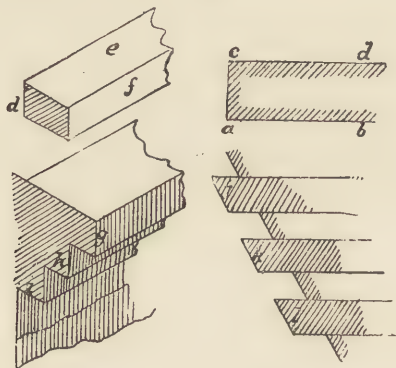


Fig. 3.

taken together are considered as an assemblage to which the term profile is applied. Seeing, however, that this term profile is so generally understood—we might almost say universally, certainly, so in a popular sense—as the side view or "end-on" view of an object, it appears to us that it might save mistake on the part of some if the word "assemblage" were alone used to designate an arrangement of several distinct mouldings in the mass or block.

General View of the Points connected with Mouldings.—Technical Designations.—The Fillet.

A few of the general principles affecting the use of mouldings may here be stated, and this in connection with the distinctive features of each kind or variety. The diagram in fig. 3 illustrates the simplest

form of moulding, which is made up purely of straight lines at right angles to each other, as at *a b, a c*. It is termed the "fillet," from the Latin *filum*, a thread or line, and this possibly because it is small and of fine dimensions compared with other and larger mouldings; possibly, also, because its office is to connect or bind together the other mouldings which go to make up an assemblage; a thread in ordinary binding work being generally used for this. Be this as it may, such is the peculiarity of this moulding, the simplest of all, and such its office. Another name by which the "fillet" is known is the "cincture," from the Latin word *cinctura*, from *cingere*, to gird or bind, which means literally a girdle or belt to bind round an object—this meaning practically involving the same idea as the fillet, a part connecting or binding together other forms. The fillet is also known as the "annulet" (the more accurate spelling of which is "anulet") from the Latin *annulus*, the diminutive of *anus*, a ring. This obviously gives the idea of a circular body, "cinctured" or girded round, and is therefore much more applicable to the moulding next to be considered in order. The fillet is also sometimes called a "band," still more indicative of its office as a binding or bonding medium for other mouldings. It is also called a "square," indicative of its right-angled and rectilineal surfaces.

The Bead.—The Astragal.

When the end of a fillet is not square, as at *d*, in section, or rectangular at faces, as at *e f*, fig. 3, but rounded in the way hereafter detailed in describing how the outlines of mouldings are obtained, as in fig. 4 at *a*, the moulding is termed an "astragal." This term is derived from a Greek word indicating in anatomy the heel bone below the ankle, and so applied to this moulding from its fancied resemblance to the swelling of the heel. The term "anulet," which we have seen is applied to the fillet in fig. 3, is, as we have said, much more applicable to the astragal in fig. 4; a section of a complete moulding of this kind being a circle or ring. The astragal is also, and perhaps most frequently, termed a "bead." And this is the most convenient term, inasmuch as that of astragal is apt to be confounded with a word sometimes used in joinery which means a different thing. The term "bead" is a Saxon word indicating a small perforated ball, sphere or globe of glass or metal, to be strung on a thread, an assemblage of the balls forming a necklace or other ornament. We find the "bead" moulding frequently curved so that its surface presents an appearance more or less distinct of a string of beads. Figs. 7, 9, and 10, Plate I., illustrate how the astragal or bead may be ornamented.

The "Torus" Moulding.

The moulding third in order to be named is illustrated in fig. 5, and is called the "torus," and is in fact but a bead of larger size than the "bead" used as such. There is also this distinction between

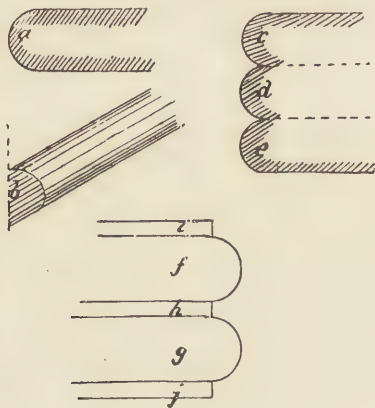


Fig. 4.

the torus and the bead. The bead is always circular in section, as in fig. 4, or at *a* in fig. 5; whereas the torus is in the Grecian form of the moulding frequently elliptical in section, as at *b* and *c*. There are still two other distinctions between the torus and the bead: the

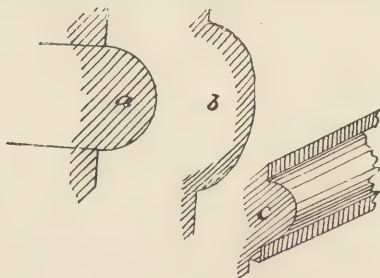


Fig. 5.

torus, being the larger in section, is used in base mouldings, or where the greatest weight is to be supported; the bead, being smaller, in the upper part of structures; and while the torus is as a rule left

plain on its surface, the bead is often carved or decorated with ornament—of which we have above given, and hereafter shall give further illustrations. The name “torus” is identical with the Latin *torus*, often translated as a “rope,” but more accurately signifying the long tendrils of a vegetable or grass twisted together to form a rope; it also has other meanings, with which we are not at present concerned. Fig. 13, Plate I., illustrates how the torus may be ornamented.

The “Ovolo.”

The fourth moulding in order is the “ovolo,” illustrated in fig. 6; this word being derived from the Latin word *ovum*, an egg. And this not merely from the swell or curve of the moulding appearing like that of an egg, but also from the fact that this moulding is in the Ionic order generally, and in other instances, carved with an egg-shaped ornament which will be hereafter illustrated. The ovolo in section forms a quadrant or fourth part of a circle; hence is derived the other name, by which it is perhaps even more frequently

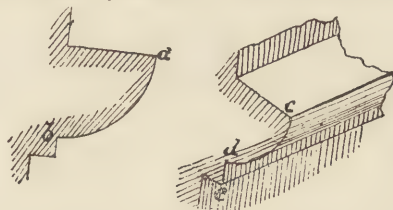


Fig. 6.

called and better known—namely, the “quarter-round.” It is also called the “echinus,” we presume from some resemblance to the beautifully curved shell of the sea-fish known by that name. Fig. 1, Plate II., illustrates how the ovolo may be decorated; so also fig. 2 in same Plate; fig. 5, Plate III., is in its contour modified from that in fig. 7, Plate II.

The “scotia” is the fifth moulding in order to be named. It is illustrated in fig. 7, and is a concave or hollow or recessed moulding, of outline from a semicircle or nearly a semicircle, as at *a*; or with the lower part of the curve, as *b*, projecting beyond the upper, as at *c*. If the quality involved in the meaning of the term is to be gained in the moulding, the concavity must be considerable at the upper part, the term “scotia” being derived from the Greek *skotus*, dark; the characteristic of the moulding being the dark shadow produced by the light falling in the upper part, as at *a d*; which depth is increased by the projecting moulding immediately above

it, which is generally the torus. The scotia is sometimes called a "mouth" moulding, and often the "trochilus." This last word is derived from the Greek *trokē*, a wheel, or from *trechō*, I run round.

The "Cavetto."

The sixth moulding is the "cavetto," illustrated in fig. 8. The term is derived from the Latin word *cavusa* hollow. It is sometimes called a cove moulding.

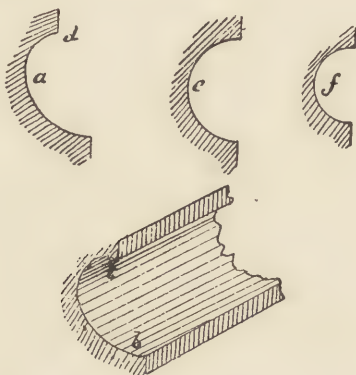


Fig. 7.

Fig. 9 illustrates the seventh moulding, known as the "cymatium" or cyma recta,—the term being derived from the Greek *kumatōn*, a wave. One application of the characteristics of this, with its "rising and falling swell," will be obvious on inspection. The cyma recta is so called, as to most the arrangement of the curve with the

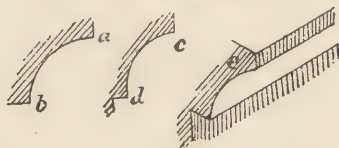


Fig. 8.

concave below, as at *b*, and the convex above, as at *a*, fig. 9, is more pleasing than the reverse, or it is more correct or right (*rectum*, the Latin for right), than when the curves are reversed, as in fig. 10, which represents the cyma reversa, the concave being at *a*, the swelling or convex at *b*. The cyma recta is evidently made up of the "cavetto" (fig. 8) and the "ovolo" (fig. 6) combined; while the cyma reversa

might, considered as an independent moulding, be looked upon as a combination of the "torus," fig. 5, and the "scotia," fig. 7.

Many who are but partially acquainted with the subject of mouldings have acquired the idea—probably from seeing that they form an essential part of what are called the "orders" of architecture, these taking the form of a column—that each order has its own particular or peculiar mouldings, which do not belong to any other.

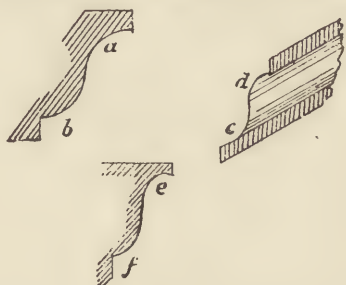


Fig. 9.

This is not the case, although it is true that some of the orders are richer in clustered mouldings than others. The mouldings are used indiscriminately, each appearing at times in all the orders. Still a judicious use of these members of a building or architectural design is illustrated by certain modes of treatment. Thus, where a part projects and carries weight, it would obviously be wrong to use a moulding which would give its weakest part at the point where the

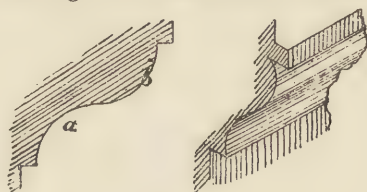


Fig. 10.

greatest strength would be clearly required, as the cyma recta, where the weakest part is obviously at *a*, fig. 9. A much stronger moulding, calculated to carry a weight above it, would be supplied by the cyma reversa, fig. 10, with its strongly swelling part at *b*: a use which may be suggestively illustrated in fig. 11, where the cyma reversa *a b* supports the fillet *c*; the weakness of the cyma recta employed in a similar case being illustrated at *d e*, which conveys the idea

that the weight of the part *d e* would snap off the thin part of the moulding at top. But by inverting the cyma recta *f d e*, turning, as it were, on the line *f* as a hinge, and bringing down *d e*, we get the moulding in *h g*. This places the curve in such a position that it



Fig. 11.

obviously gives a moulding well adapted for a "base moulding," terminated with a fillet *h* resting on the plinth or base *i*; while terminated at the upper part *h* by another fillet *j*, it supports the part *k*. And in this way we find the inverted cyma recta.

Again, as the fillet is used to connect mouldings together—an

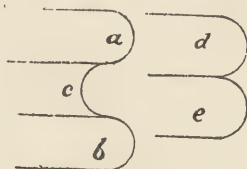


Fig. 12.

office which is also done by the astragal or bead, fig. 4—so the scotia, fig. 7, is used to separate parts which would not look so well in close contiguity, as two mouldings circular in section, but large—like the torus. This is illustrated in fig. 12, where *a* is a torus at top, and *b* another at bottom, these being separated by a scotia, as at *c*. This

is evidently more pleasing to the eye than the arrangement at *d e*, where the two tori are in close contact. The scotia may be a full semicircle in its concavity, as at *c*, fig. 12; but if less deep at top, *a*, fig. 13, than at bottom, *b*, it throws the torus *c* forward in advance of the torus *d*,—an arrangement which pleases the eye better than where the two, as *a* and *b* in fig. 12, are flush at their front with each other. A “scotia” used in this way, as separating parts which are heavy or comparatively so, as two large tori, is often caused to

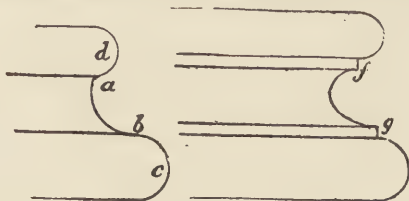


Fig. 13.

have a more finished look by springing at base *f*, fig. 13, by a small fillet, as shown, and by another at top *g*. The effect of this will be seen at *f g* in fig. 13.

We have seen that one moulding is produced by changing or reversing the position of another—as the semicircular scotia, fig. 7, is simply the torus, *a*, fig. 5, reversed, the solid part changing sides; the torus *a*, fig. 14, projecting to the right, with the solid part to the left, thus becoming a scotia, *b*, with its concave side to the left

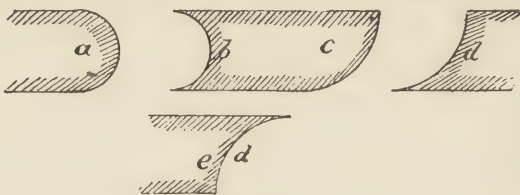


Fig. 14.

hand, and the solid parts to the right; the ovolo in fig. 6 reversed gives us a cavetto, as fig. 7, the solid side *c* of the ovolo in fig. 6 to the left, the moulding projecting to the right, giving the concave side of the scotia *d* to the left, with the solid part *d* to the right hand, or the cavetto in *e* is the ovolo in *c* inverted. So also can we, by combinations such as in figs. 11, 12, 13, produce “assemblages” of moulding for a variety of purposes, which will be pleasing to the eye just in proportion as the principles we have so far enumerated.

In the last paragraph we gave a description of the ornamental

forms used in constructive decoration known as mouldings, traced their origin and gave the derivatives of their received names, and illustrated in rough outline the general features of their form, shape, or configuration. We propose now, in concluding the subject, to take up the method by which the outlines constituting these forms are obtained by the draughtsman. And here we have to point out that all mouldings are, or may be, divided into two great classes—Classical and Gothic—otherwise ancient and mediæval. The Classical is divided into two branches—the Grecian and Roman; although, strictly defined, the Grecian is the branch to which the term Classical is strictly applicable. Adhering to the above—which is the division generally or popularly held—we have to note this great distinctive difference between the two branches, the Grecian and Roman; and that which we deem it right to state here is a distinction noticeable in what are popularly known as the “orders of architecture” of the two styles Grecian and Roman. In classical times—for there was not then the same marked division between sculptors and architects which now obtains amongst us—both undertook the same class of work indiscriminately, the sculptor designing a building which he afterwards adorned with the outcome of his genius in his own particular walk of art, for which he would have the marked preference; just as the architect would proceed to decorate with sculpture and sculptured ornaments the building which had originated in his own design. In the early and middle ages we find the same practice existing and carried further—if indeed it was not so also carried on in ancient times of classical Greece; for a man of genius would be at once capable of doing work as an artist (using the term in its restricted modern sense as designating what we call a “painter”—that is, a transferrer of natural objects and figures to canvas), a sculptor, or an architect; work now with us considered as belonging strictly to three professions being then done by one man. A striking middle age or early example of this we find in Michael Angelo, who boldly and successfully dared to be great at once as painter, sculptor, and architect; much, moreover, of the work of another modern profession—that of the civil engineer—being also done by him.

The Grecian artist, considering him in the twofold or threefold aspect above noted, was distinguished pre-eminently as such for his intense love of what we term the “beautiful”—at once in form and colour—specially of form, which is the artistic point this treatise concerns itself with. This found expression in everything which dictated or gave rise to contour, of the lines which gave to a solid body the attribute of what is called beauty in form or outline (see volume entitled “The Ornamental Draughtsman” for some remarks

on the "beautiful" in art). This estimate of beauty, upon whatever theory based or by whatever practice carried out, is noticeable in all Grecian architectural and sculptured work, the "lines" of which are always pleasing—never offensive—to the eye, even to that of the uncultivated in art. It is this attribute in design which gives the sense or completeness, the idea that there is nothing lacking, that all is there which should, all absent which should not be there. The best term to distinguish this feeling is that indeed which artists use for it—that is, "repose"; that is to say, the eye "rests" satisfied with the object thus treated, as one rests on finding a thing sought, further exertion in seeking being unnecessary.

Not seldom have attempts been made in modern, or, as we might say, in recent times, to discover and explain the rule by which the Grecians gave expression or existence to this sense of repose in all their architectural and sculptural works. For so invariably is it present in them, that it is supposed they must have had some rule or law which they could apply at will, it being difficult by some to suppose that this artistic repose was within the competence of all the Grecian artists concerned in the enrichment of form. Others again have held, and still hold, that the sense of the beautiful in form was so inherent in the Greek that he could not help giving expression to it, in whatever work of art, wherever form was required to be given—which is equivalent to saying in all he did. He could not, such maintain, give or create an ugly form, do what he would: if a curved line were to be drawn on a rounded object, moulded in the clay, or cut out of marble, the line in his mental conception, and in his manipulative treatment of it, could not be otherwise than what we now see it in all his works which remain to us—beautiful. The Greek artist, in brief, could not if he would, and would not if he could, be otherwise than beautiful in his conception of lines and form. We have said that this is the view of the majority who have written on the subject, or expounded otherwise their views about it. And, although we are no believer, at least from the artistic point of view, in the statement that the majority is always right—facts as they exist artistically at least around us being against this notion—still we believe that in this particular point we hold what are the true facts. Certain it is that none of the attempts made to show the rule, even on principle, by which Greek artists were guided in giving expression to form and outline, have been accepted by all as correct, or indeed by many, each school or theory having its own advocates, who could see little or no merit in what was advanced by any other than those of their own school.

The other great people who flourished in ancient, or, still to use

the popular term, in classical times, who possessed an art or desired to have one, and which found expression chiefly in their buildings and such ornament as was used to adorn them—for in pure sculpture they took no position—were the Romans. Beyond all controversy, as artists they occupied quite another place from that held by the Grecians. As architects, indeed, they were but the copyists of the Greeks; so also in the sculptured ornaments by which their buildings were adorned. And, like other copyists merely as such, their copies were much more frequently debased than accurate. They took possession, so to say, of the form, or apparent form, but they failed to be actuated by the spirit by which that form had the beauty given to it by the Grecian artist or architect who had originally conceived and executed it. We are not here affirming that the Romans did nothing fine in architecture or in its attached or attendant sculptured ornament: we know they did; all that we contend for here—and it is the only point with which in this treatise we are concerned—is that they had not, and certainly did not, exercise that marvellous sense of the beautiful in form or outline which characterised the Grecian artists.

Take the outlines of their mouldings, for example. Upon whatever fixed principle he proceeded, if any such he had, the Grecian succeeded in giving to them precisely the attribute of that "repose" to which we have already alluded, and which we know to be an invariable concomitant of, or rather a decided proof of, the sterling value, so to say, of all artistic work. In drawing these outlines it is quite an easy—because where Grecian art is concerned it appears to be only a natural—thing to conceive that the Grecian artist would, with a sweep of his hand, "put in" (to use a now common technical term) or draw those beautiful curves. He would be subject to none of the trammels of a fixed or conventional rule, would be guided by the dictates of no special law as open to his neighbour who might not be so artistic as he was; he would simply draw the curves "evolved" (to use an expression common enough nowadays) "from the depths of his inner consciousness," the probability being that he had no consciousness of doing anything markedly good or artistic at all, merely doing that which came intuitively or naturally to him as the right thing to do.

The Roman, if he was anything—and something as a potent factor in the world's work he assuredly was—was decidedly practical. And knowing him to have been pre-eminently this, it is now in turn an easy thing for us to conceive that in copying the Grecian mouldings, with all the exquisite grace of their outlines, he feeling beyond all doubt his lack of that something which he knew—or at least had

some glimmerings of—he could not do, would naturally try to imitate them by curves which, while they would be like them, would to him at least possess the great advantage of being able to be easily done. And not only so, but to possess this characteristic—that once used they could be used again, producing precisely the same results; and used moreover, or of course, by any one else other than himself. Thus, the Grecian, if he followed any known figure as the basis of his lines, obviously followed—the reader will mark the “if” in conjunction with what we have already said on the subject of a definite law or rule guiding him—that of the ellipse, not the oval (see the volume entitled “The Geometrical Draughtsman” for a distinction between these two forms). The Roman, on the other hand, feeling his own deficiencies in that artistic conception of beauty which he knew perfectly well the Grecian artist possessed, and being also a practical man, would see that the easiest way to copy those mouldings of the Greeks, with all their exquisite contour, would be to take the circle as the basis of the curves. This figure, the circle, is easily described, and by one as correctly as another; and thus by implication any plan of procedure by which the peculiar curves and lines of contrary flexure which formed the Grecian mouldings could be imitated by some combination of circles or parts of circles would, once discovered and recorded, be available by any one who could follow intelligently the steps of the process.

Whether or not justice or injustice is done to the ancient Romans in giving to them the credit of discovering and enumerating methods of mechanically or geometrically describing or drawing the curves of mouldings the lines of which are parts of circles, we do not take upon ourselves to determine. We should perhaps be nearer the truth if we said that the methods now pretty well established of finding geometrically the curved lines of mouldings by centres laid down by fixed rule, owe their existence to peoples other than the Romans, and were made known at a period much more nearly approaching our own times than those of the ancient Romans. Be this as it may, the reader will now perceive that the distinctive feature of the Grecian branch of classical moulding is that their curves are those of the ellipse, or approaching to it, while those of the Roman branch owe their origin to the circle, and are based upon it. The other great division of the general subject of mouldings is the Gothic or Mediæval. While it is true that many of the curves of the different styles or orders of Gothic architecture can be described geometrically, being parts of circles described from defined centres, it is more correct to say that the curves are drawn by the hand, aided by the eye only. It is needless here to say that this method is much more akin to

true artistic work—the department of ornamental drawing—than it is dependent upon geometrical or mere mechanical precision. Still it is necessary to know the conventional or ordinary methods by which the lines and curves of the mouldings used in constructive decoration or ornamented construction are formed and produced. And this we now proceed to do, taking up first the division of Classical mouldings, in its two classes of Grecian and Roman. Although we place the Grecian first in the list, we shall give the mouldings of these two classes in the reverse order, giving in each case first the ordinary or Roman, and second the higher class of mouldings—the Grecian.

Taking the mouldings in the order named in a preceding paragraph under the present heading, the first met with is the “fillet” (fig. 3). There is no difficulty in describing the outline of this moulding. It is simply rectangular, and we notice it here to illustrate one or two ornamental forms by which it may be decorated, these being taken from established authorities.

The “bead” (fig. 4), is also of a very simple character, and is formed by simply bisecting the distance ab (fig. 5, Plate I.) on the point c , and through c drawing a line, as ecd . If d is the point of termination or extremity of the moulding, the distance as ab is to be set back from d to c on the line de , c being the centre of the semicircle bad , giving the outline of the moulding, which may be made of any length required, the other extremity being terminated in the same way as at bad . “Beads” are almost always semicircular in section, as now shown, but they are sometimes made flatter in section—that is, the centre from which it is described being set farther back than the point c , as at g . This gives with the radius gh or gi a curve ifh , not so convex as that at adf . Beads are usually single; they are sometimes grouped together, as two at j or three at k , being generally separated from each other, as the beads l, l , by the fillets m, m . Single beads are usually separated from other members by fillets, as shown at n, n .

“Beads” may have their contour or bounding line formed elliptically—that is, the section being part of an ellipse, as in fig. 6, Plate I., in place of a circle, as at abd , and hfi , fig. 5. The diagram in fig. 6, Plate I., at abc is not a correct elliptical line, but is part of the figure known as the “oval,” which may be called a conventional ellipse. We shall hereafter have occasion to show the application of the true ellipse to the formation of mouldings; meanwhile the diagram in fig. 6, Plate I., shows a simple method of drawing a curved line sufficiently near to the true curve of an ellipse for many practical purposes. Let ab be the greater breadth of the bead

to which it is desired to give an elliptical or oval section. Divide this into three equal parts in the points c and d . From points c and d as centres, with cb as radius, describe circles in faint lines as shown dotted. From same points as centres, with distance cd as a radius, describe arcs cutting in the point e ; with radius as ef , describe an arc fgh , joining the circles described from centres c and d . The full line shows the curve or outline of the moulding. This form of moulding is often used for what are called "sunk mouldings," in which the highest point of the curve, as at g , is either "flush" or on a line with the surface of the body or part to which the moulding is applied, or below this general surface line. In joinery where mouldings are much used any moulding which projects above the surface, as the moulding of an architrave or a door panel, is called technically a "bolection" moulding.

What is known as a "quirked" bead is illustrated in fig. 6, Plate I.,

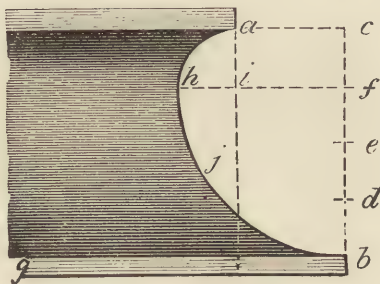


Fig. 15.

at jkl , in which the bead j , circular in section, while flowing into the base line k of the piece, is cut off from the upper part l by the recess or "quirk" at m . A double quirked bead is shown at bead n at points o and p . The "quirk" or recess is generally made deeper and broader, as at the moulding q at point r . A double quirk is shown at i and j . Different styles of ornament adopted for beads are shown in figs. 7, 8, 9, 10, Plate I.

The "torus" (fig. 4) is simply an enlarged bead, so far as its section is concerned, and may be described precisely as the bead already explained.

The moulding next in order which falls to be described is the "ovolo" (fig. 6); this, as its other name—the "quarter-round"—indicates, is the one section of its outline, or fourth part of a circle or quadrant. In fig. 11, Plate I., we give a diagram showing one method of describing the section or profile of the "ovolo." In diagram to the

left the curve is exactly the quarter of a circle, the line being drawn from point *b* on lower fillet to *a* on upper, *a* being the radius of the arc *b c*. In the diagram to the right the curve is less than a quarter of a circle. The line *b d* is drawn connecting the two points terminating the curve. This is bisected by describing the arcs *ef*, *gh*, the line drawn through the points of intersection of the arc cutting the line *d a* in *h*, which is the centre of the arc *b d*, giving the curve of the moulding, *h b* or *h d* being the radius of the arc described from point *h* as centre. In fig. 12, same Plate, the Grecian torus, which when reversed gives the Grecian ovolo, is illustrated. The points *a*, *c*, terminating the curve of the moulding, are joined by the line *a c*. This is divided in the point *e*, through which a line *f e g* is drawn parallel to the line *c b*. The line *a* is extended to *l*, and *al* made equal to *a e*. From *l* a line parallel to *a c* is drawn to *k*. From *e* make *e g* equal to *e a*, and *e j* to *e g*. Divide distances *a c*, *a l*, each into four equal and similar parts, and number them as in the

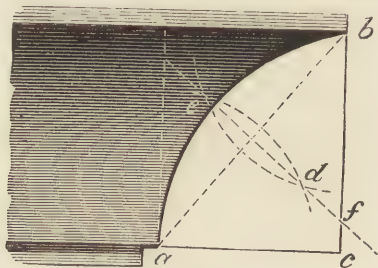


Fig. 16.

drawing. From the point *g*, through points in *a c*, draw indefinite lines as shown, and from point *j*, through points in *a l*, draw another set of lines, as *j 1*, *j 2*, etc. These two sets of lines will intersect each other in the points as *m*, *n*, *o*, through which, if a curved line be drawn from point *a* to *j*, it will give the upper part of the curve; the lower part, joining *j* with *c*, will be obtained by drawing a line through points *p*, *q* and *r*, found in the same way as above described.

To describe the moulding known as the "scotia" (see fig. 7, *ante*).—Let *a*, *b*, fig. 15, be the two points terminating the curve of the moulding. From *a* draw *a c* parallel to *b g*; and from *b* draw the line *b c* at right angles to *b g*. Divide *b c* into four equal parts, as *d*, *e* and *f*, and from the third of these, as *f*, draw an indefinite line parallel to *b g*, as *f h*. From point *c* draw a line parallel to *c b*, cutting *f h* in point *i*: *i* is the centre of the arc *h a*, the radius *i a*. From point *f* as centre, with distance *f h*, describe the arc *h j b*, which

completes the curve of moulding. In fig. 6, Plate II., we illustrate the method of finding the points of the curve of the Grecian scotia, which will be easily understood on inspection of the diagram, comparing it with the upper diagram in fig. 12, Plate I. In fig. 7, Plate II., we give illustrations of two forms of scotia, with the curve formed by parts of an ellipse, for methods of describing which see the volume entitled "The Geometrical Draughtsman."

To describe the moulding known as the "cavetto" or "hollow" (see fig. 8).—Let ab , fig. 16, be the terminating points of moulding curve. From b drop a vertical line to c , cutting a line ac produced from a . Join ab , and bisect this by a line ed , cutting bc in point f : this is the centre of the arc bea of the moulding, the radius being fb . In the lower diagram in fig. 12, Plate I., we give a diagram showing how the curve may be formed by being drawn through points found by intersecting lines. In this a and d are the terminating

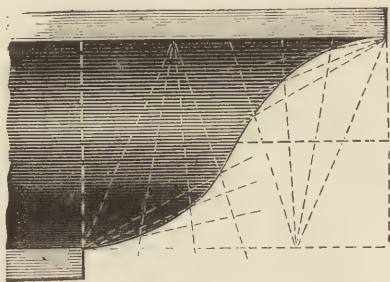


Fig. 17.

points of the curve. From a and d draw indefinite lines ac , de , parallel to each other. From d drop an indefinite vertical line dg , and from a draw parallel to dce another line, as ac , cutting line dc in e . Divide dc , ac , each into the same number of equal parts, and number them as in the drawing. Make cg equal to de , and from points 1, 2, 3, in ac , draw lines to point g . Then from point d , through points in ae , draw lines cutting those drawn from point g . Through the points of intersection draw a curve forming the profile of moulding.

To describe the cymatium or cyma recta (see fig. 11, jg).—The points a , b , fig. 3, Plate IV., are joined by the line as shown in diagram, and from these points vertical lines are drawn. The line ab is bisected in the point c , and the parts as cb , ca , are again bisected by arcs through the intersecting points of which lines are drawn, intersecting or cutting the vertical lines drawn from extremi-

ties of the moulding. Those points give the centres of the arcs, which, meeting at the central point of diagonal line joining extremities of the moulding, give the outline of the curve. In fig. 17 we show how the curve of the Grecian cyma recta can be obtained by intersecting lines.

To describe the cyma reversa or inverted cymatium (see fig. 11, *ab*).—Let *a* and *b*, fig. 4, Plate IV. (the engraver has placed the shading on the right in place of the left side of the curve), be the terminating points of the moulding. Join these points by the diagonal line as shown, and bisect it in the point *c*. Through *c* draw a vertical line, *ec*, of indefinite length. With any radius greater than half the distance *ac* or *bc*, describe arcs of circles as shown. Through the points of intersection of these, *fg*, *hi*, draw lines cutting the vertical line *ce* in two points, as *e*, one above the other, below the point *c*. These two points will be the centres of arcs of circles *ac*, *cb*, meeting

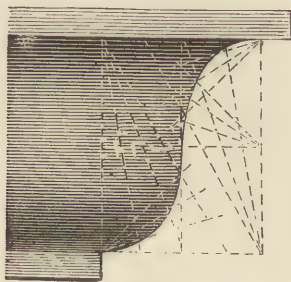


Fig. 18.

in the point *c*, which will complete the curve, giving outline or profile of moulding. In fig. 2, Plate III., we show how the Greek cyma reversa or inverted cymatium can be drawn by means of intersecting lines. In fig. 1, Plate IV., we give another method of finding the curve of the cyma reversa, with pronounced curves, forming an effective moulding. In this *a* and *b* are the two terminating points of the moulding. Join these by the diagonal line, bisecting this in point *c*, through which draw a horizontal line as shown. Divide *ac*, *bc*, into any and the same number of equal parts, as four or six or any even number—four in the drawing; and from each of these points draw horizontal lines of indefinite length. From the central part, as *d*, with radius of half *ac*, describe circles as shown in dotted lines. From the points of division, as in *ae*, draw at right angles to the diagonal line *ab* lines of indefinite length. Then, taking the distance

as $d g$ in the compasses, set this off from point d in the horizontal line drawn from centre of circle to point 10. Next, with distance 6 7, set off a second horizontal line to point 9, and so on till a series of points are obtained, through which a line must be drawn by hand, which will give the outline of upper half of moulding. The lower half is found in the same way. Thus, $h f$ is equal to $h 12$, and so on.

In fig. 9, Plate II., the cyma recta is shown as obtained by lines of ellipses. Fig. 10 in same Plate, and figs. 4, 5, and 7, are examples of ornamental cyma recta mouldings. In fig. 1, Plate V., and in fig. 2, Plate IV., we show the cyma reversa curve produced by parts of ellipses; and in figs. 4 and 7, as also in figs. 4 and 6, Plate VI., examples of this moulding ornamented.

By reversing fig. 3, Plate IV., a form of moulding frequently used as a base moulding is illustrated. The method of describing it is shown in same figure. Join a and b , the terminating points of the moulding, and bisect this in point c . With any distance as radius greater than half of distance $a c$ or $c b$, describe from the points a , c and b arcs cutting in points d , e , f , g . From point a drop, and from point b raise a vertical line, and draw through points d , e , f , g , where the arcs of circles intersect, lines cutting the vertical lines, as at j and k . Those points are the centres of arcs meeting in c , with radius as $k a$, $j b$, completing the curve of moulding. If the shading or cross-hatched lines were to the upper or left-hand side of curve in fig. 4, Plate IV., the moulding would be the same as last described, and as farther illustrated in fig. 5, same Plate, in which, as in Grecian mouldings, the curves are obtained by parts of ellipses. Ornamented examples of this form of moulding are illustrated in fig. 10, Plate II., and in figs. 4 and 7, Plate III.

A canted or oblique moulding is illustrated in fig. 8, Plate IV., and to the left-hand side of centre line in fig. 8, Plate IV., that to the right being a circularly curved moulding, forming pediment to a design of which the cornice is shown. Figs. 6 and 7, Plate IV., illustrate the method of describing canted or oblique mouldings. Let $a b c$, fig. 7, be the moulding to be shown as on the oblique line $c' d$. From terminating point a of mouldings draw a line perpendicular to $c' b$, and divide this into points by drawing from all the extreme points, as h , j , of moulding, lines parallel to $c' b$, cutting vertical line $a b$, as shown in points k , n , etc. From these points in $a b$ draw lines all parallel to the oblique line $c' d$. At any convenient point on line $c' d$, as at g , draw $g b$ at right angles to $c' d$; $g f$ will correspond to the line $a b$. Next, from the various points on line $a b$ measure to the points terminating the moulding, as to j and i , and

set those off from corresponding points on line gf , such as from p to q on the oblique line jq : pq is equal to kj , and so on. A series of points, as n, m, s , are obtained, which give the terminating points of the moulding, which is the canted moulding required. Fig. 6 illustrates the same method applied to the cavetto moulding.

Mouldings are reduced or enlarged in drawing them by various methods. Three methods are illustrated in figs. 1, 2 and 3, Plate III. The most familiar, and perhaps the most frequently adopted, is that known as the copying, reducing or enlarging by the square, as in fig. 3, this being the best where the curves are complicated. In diagram A, fig. 3, is the moulding to be copied. The drawing is temporarily and lightly secured to the drawing board (see the volume entitled "The Building and Machine Draughtsman"), and at the side and bottom margins a series of equal divisions are set off. From these lines are drawn horizontal and vertical, which intersecting form a series of squares which cover the surface of the drawing of moulding. These lines should be put very lightly in with pencil, so that they can be easily rubbed out, restoring the drawing to be copied to its original condition. If the drawing is simply to be copied, a similar set of squares are to be drawn lightly in on a clean piece of drawing paper, which is to receive the copy. But if the drawing is to be reduced, say one-half, then the squares on the clean paper must be one-half the size on the drawing to be copied. This will be done by making the divisions on the lower and right-hand side of the paper just one-half the extent of the divisions on the drawing to be copied. If this latter is to be enlarged to twice the size, the squares are to be twice the dimensions on the clean paper. It is obvious that by this means a drawing may be reduced or enlarged in any proportion desired. The lines at top and bottom on drawing to be copied are those lightly numbered 1, 2, 3, etc., as indicated by letters a, b, c , etc. The corresponding lines on the clean paper are next to be numbered or lettered, as in the drawing to be copied. By observing the position of any given point in the drawing to be copied, as point 3 in fig. 3 in diagram A, which is in the intersection of horizontal line d with vertical b' , the corresponding point on the clean paper, as diagram B, can at once be put down. All the points of A can be thus transferred to diagram B, and then a line drawn by hand joins all these points. Should a point be placed within a square, its position in the copy must be determined either by the eye or by measurement with the compasses. The more numerous the intersecting lines, the better, for the more accurately will the curve be drawn. This holds true, it is scarcely necessary to say, to such methods as are illustrated in fig. 1, Plate IV., fig. 12, Plate I.,

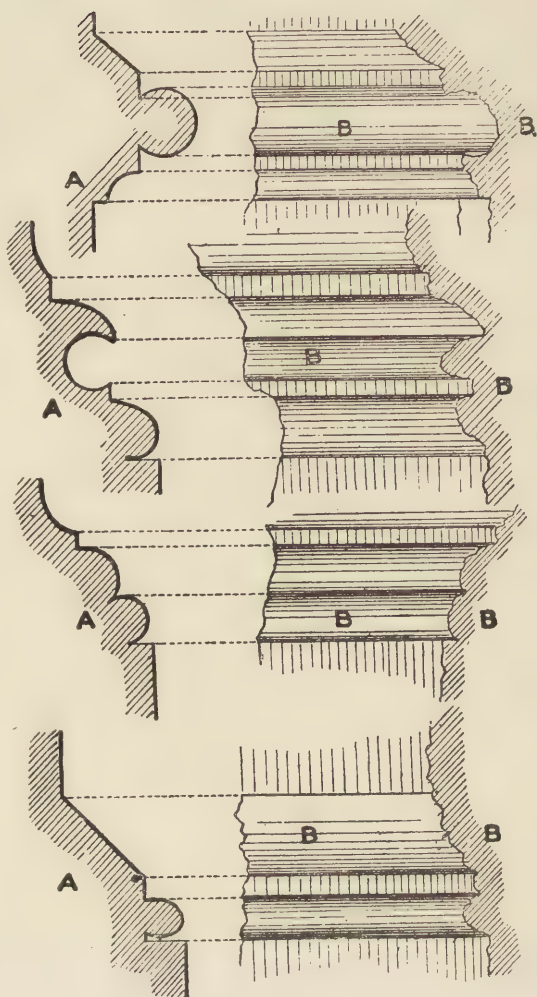


Fig. 19.

etc. A note on this point will be found in the volume entitled "The Building and Machine Draughtsman."

Another method of reducing or enlarging a moulding is shown in fig. 1, Plate III., by drawing lightly on the drawing to be copied, as diagram A, lines horizontal and vertical, as shown from the terminating points of the moulding. Lines similar in number and position are drawn on a piece of clean paper, as in diagram B. If the drawing in A is simply to be copied—that is, of the same size—these lines are to be of the same distance from each other in B as

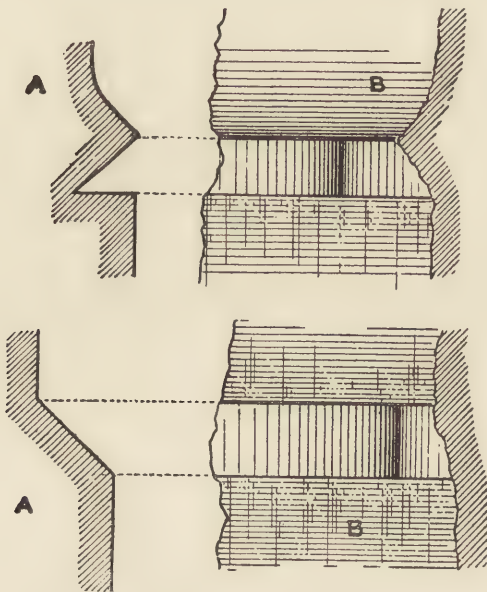


Fig. 20.

in A. But it is obvious that, if it be desired to reduce or enlarge A in a given proportion, by making the distance between the lines in B as much less or as much greater than the distances in A, the corresponding points in A will be found in B, but in the desired proportion as regards distance. The corresponding letters in A and B, fig. 1, Plate III., will fully explain the method. A moulding may be drawn reversed in position, and at the same time drawn of the same size, or reduced or enlarged, by the method shown in fig. 2, Plate III.

Gothic Mouldings.

A somewhat ponderous treatise could be prepared on this subject, so altogether profusely rich is it in examples by which it can be illustrated. It may, indeed, be said that practically there is no

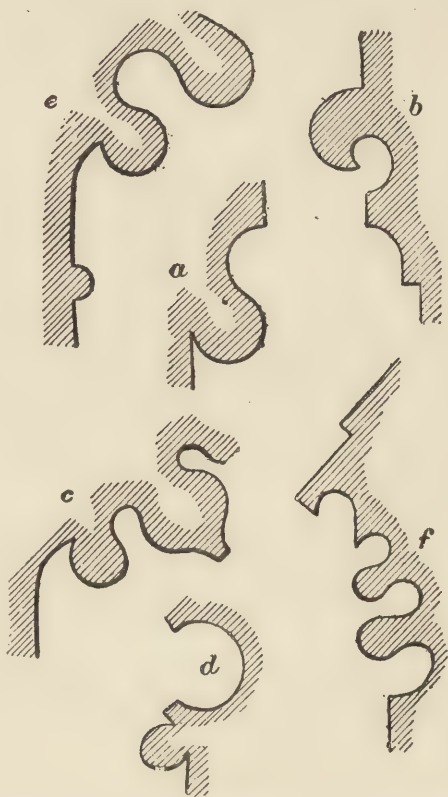


Fig. 21.

defining the limit beyond which examples can no longer be had, as it can be said that there is practically no limit to the genius of design by which examples can be multiplied. For where the spirit of the Grecian and the Roman styles of architecture defines the

work which is done in them with a certain precision, so that the forms or outlines of the mouldings are definite and limited in number, the parts of these mouldings may vary in proportion in relation one to another; but the forms themselves never vary. Combinations of the forms may be, and are, made in great variety; but the forms themselves, the elements of the combinations, never vary: the designer is, so to say, tied down to the particular lines which constitute that definite moulding, and which is always designated by its own peculiar name. But in Gothic architecture, which has been designated as pre-eminently the architecture of decorated (building) construction, there are no precise and rigidly defined forms known



Fig. 22.

by definite names: in point of fact, the designer of Gothic mouldings is untrammelled by rules and forms; he is, so to say, a law unto himself, and so long as in his designs he keeps to the general spirit of the particular style of Gothic architecture under which he for the time being works, no one can say that the designs of his mouldings are wrong. If in Classical architecture he introduced a change in any one of the established forms of mouldings, which, like the laws of the Medes and Persians, are supposed to be incapable of being changed, the change would be recognised at once as an innovation outside the style, and not as belonging to it. But in Gothic architecture innovations, which might be so termed, might be made every day without incurring the charge of breaking certain definite rules

or canons of taste. But the student of architecture as an art, who

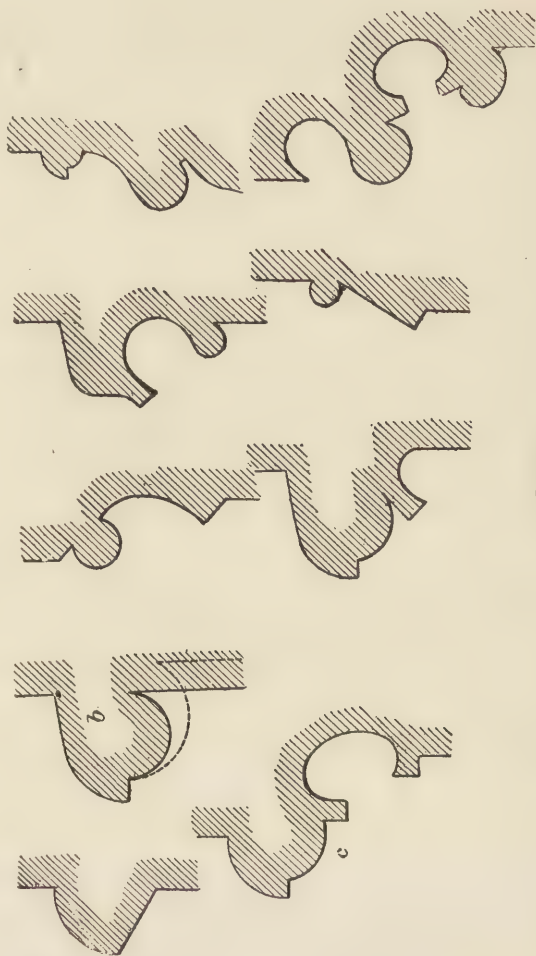


Fig. 23.

reads of the different styles into which Gothic architecture is by writers generally classified, would be justified in concluding that,

after all, there must be in connection with Gothic architecture certain laws or canons of taste defining the work done under each style, inasmuch as, seeing there are certain recognised styles, there must be some definite rules or laws by which that particular style is governed, and by which its work can be recognised. But while this, so far as it goes, is correct, it is also equally true that Gothic

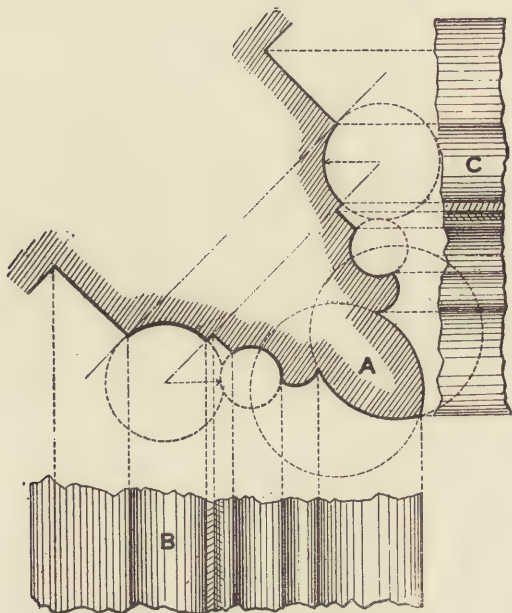


Fig. 24.

architecture, unlike Classical—Grecian and Roman so called—is to a singularly wide extent free from rules or canons of taste, so far as such rules tie the designer down to certain limits beyond which he cannot legitimately go. On the contrary, the designer in Gothic styles is free to indulge the widest stretch of his artistic imaginings, although it is equally true that he will find himself working for the time being in consonance with the spirit which actuates, so to say, some one or other of the particular styles known as Gothic.

Gothic Mouldings—The Different Styles.

While it is true that the designer of Gothic architecture is free to follow the bent of his own taste and "artistic imaginings," and is freed from such restraint of law as the Classical style of necessity imposes upon him, it is comparatively an easy thing to show how it has come about, notwithstanding all this, that Gothic architecture has found its peculiarities or characteristics ranged under classes more or less definite to which the name of "styles" has been given—just as Classical architecture ranges itself under the different classes known

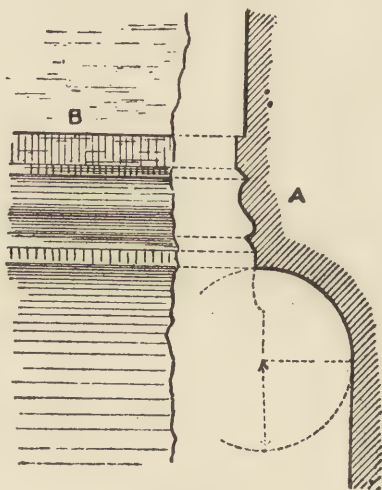


Fig. 25.

as "orders." If the student in architectural and decorative work traces the history of the art, he will find that Gothic architecture has found its chief developments at different periods in the history of man, and some of them in different countries. Taking our own country, and leaving out, as opening up a field of inquiry altogether too wide for the limits of the present volume, all reference to Continental countries, in which the Gothic style has met with some of its richest, if not grandest, developments—taking, we say, our own country, we find that Gothic architecture has gravitated or solidified, so to say, into five different "styles," corresponding to the five "orders" of Roman architecture, those being first the "Saxon,"

second the "Norman," third the "Early English," fourth the "Perpendicular," and fifth the "Decorated." Some writers take exception to "Saxon" being considered a Gothic style, just as other authorities excluded the "Norman," thus reducing architecture to three styles corresponding to the three "orders" of Grecian classical architecture. Taking, however, the four styles beginning with the "Norman" and ending with the "Decorated," we can easily understand how with certain ideas dominating the minds of the early builders till now, under what we may call the constructional difficulties with which they had to contend, the materials with which they had to work,

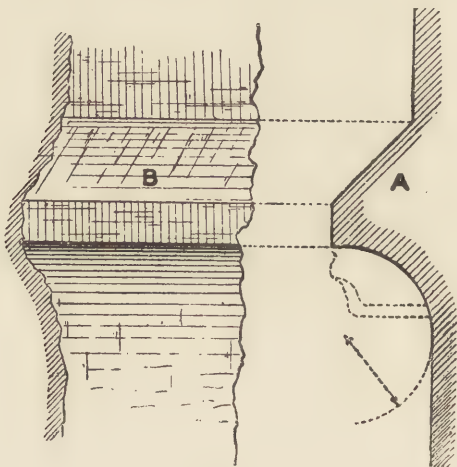


Fig. 26.

and the climatic conditions under which they were placed, a peculiar class or kind of feelings would arise which would so influence the builders and architects; for, in truth, the early practisers of Gothic architecture comprised in one person the offices of designer (the architect), and artificer or handicraftsman (the builder), the dual office not seldom meeting in the person of a priest or ecclesiastic, for Gothic is specially ecclesiastical or church architecture, the first and most numerous examples of this being our churches, abbeys, and cathedrals. Acting under the influences of each period, each period would have its own peculiar characteristics of constructional or constructed decoration, which would concrete, so to say, together,

forming that particular style—as, for example, the “Norman,” the “Perpendicular,” and so on. In process of time, therefore, each style, as it received its various developments, would have its own peculiar features of ornamentation or decoration; and thus it came about that a wide series of moulding profiles would have existed, and as each “set,” so to call it, clustered round its own style, there were formed so many classes or kinds of mouldings which had attached to them the name of the peculiar style to which, as a rule, they belonged. Thus it is that, much after the way in which the

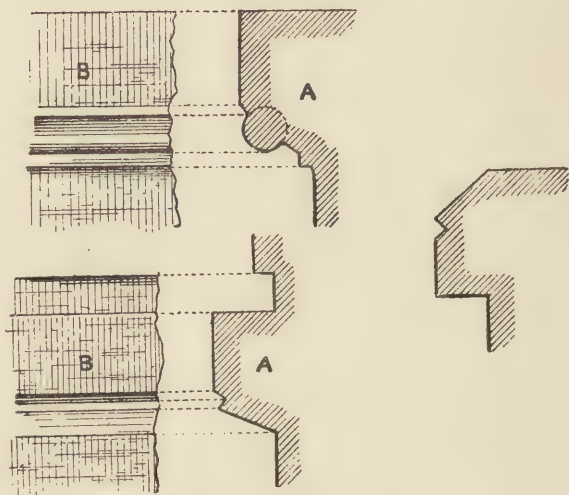


Fig. 27.

Grecian and Roman architects formulated or classified their mouldings, the Gothic designers of the present time find ready formulated or classified to their hand a series of classes or styles of Gothic mouldings, the original designers of which generations and generations ago had not dreamed that they were engaged in the process of creating precise and defined forms or profiles of mouldings, which were to be accepted in future times as the mouldings of that style, and that style only. As they had evolved these profiles of mouldings from their own train of feelings and influences, exercising a wide liberty of design, so doubtless there never occurred to their minds anything else than this—that those who followed them would exercise

the same liberty. They had themselves no thought of founding a style: what they—the old builders—thought of chiefly, if not of only, was the doing of the particular work they had in hand, and the doing of it in the best possible way open to them, doing it under the peculiar influences at work in their minds at the time. Thinking—if they thought at all in this direction—that those who followed them would do as they had done, take up their work primarily for the glory

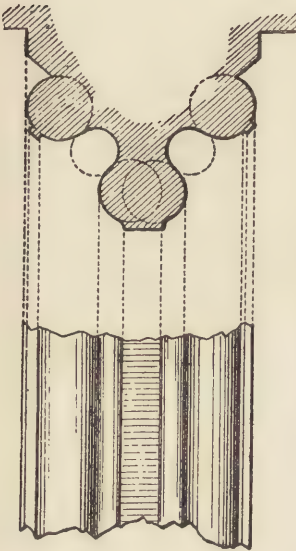


Fig. 28.

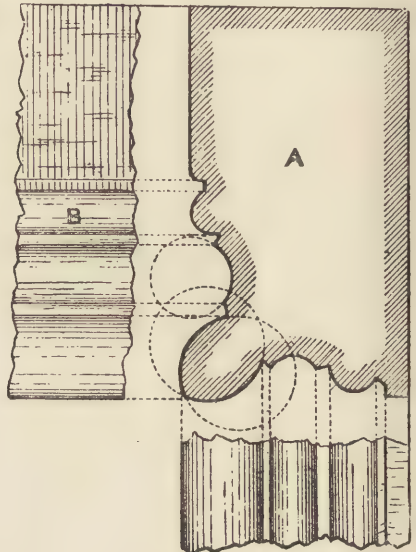


Fig. 29.

of God and for the honour of His shrine, they felt compelled to do their work and to do it well, working under such influences as dominated the times and their feelings. Hence, as each individual builder was working under this view as to what was not only his duty, but his privilege and pride, we had under that particular style a richness of design and detail, as well as a breadth and grandeur in the general, which stamped the work of each with that rare individuality which is so seldom met with now, but which gave birth to what we call the style. What we give, then, under the head of

Styles of Gothic Mouldings

must be taken simply as general examples of the mouldings met with in what are by the majority of architectural authorities designated as the styles of architecture. What we give, then, can only

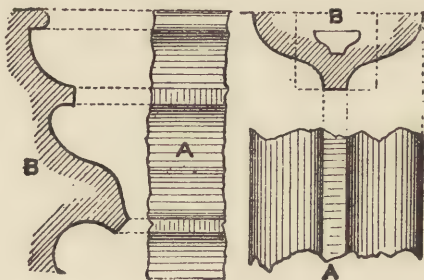


Fig. 30.

be taken as general indications of what are special characteristics of each style; for, as we have already said, the examples met with in actual buildings are infinite in variety, and although we are nowadays, unfortunately, much more frequently copyists than original designers,

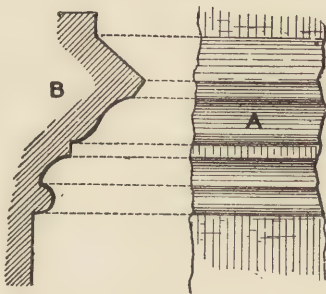


Fig. 31.

still this variety is being added to every day by our Gothic architects. We would earnestly counsel the youthful architectural or building decorator to study for himself in the school of such ancient work as has been handed down to us, to fill his notebook with sketches taken whenever the opportunity presents itself. When such sketches came to

be classified, his notebook would be on the large, what our sketches now to be given are on the small scale—a *vidimus* of Gothic mouldings.

Following the classification of the styles we have adopted, and thus beginning with the "Norman" style, we give in figs. 19 and 20 a few profiles characteristic of the style. In all the drawings A gives the section or profile, B the front elevation of the moulding. In fig. 21 we give examples of profiles of mouldings in the "Early

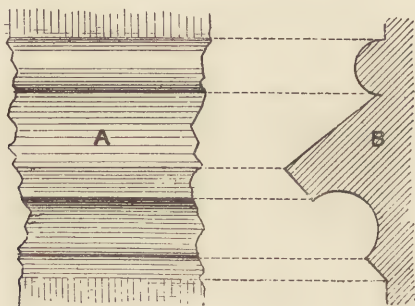
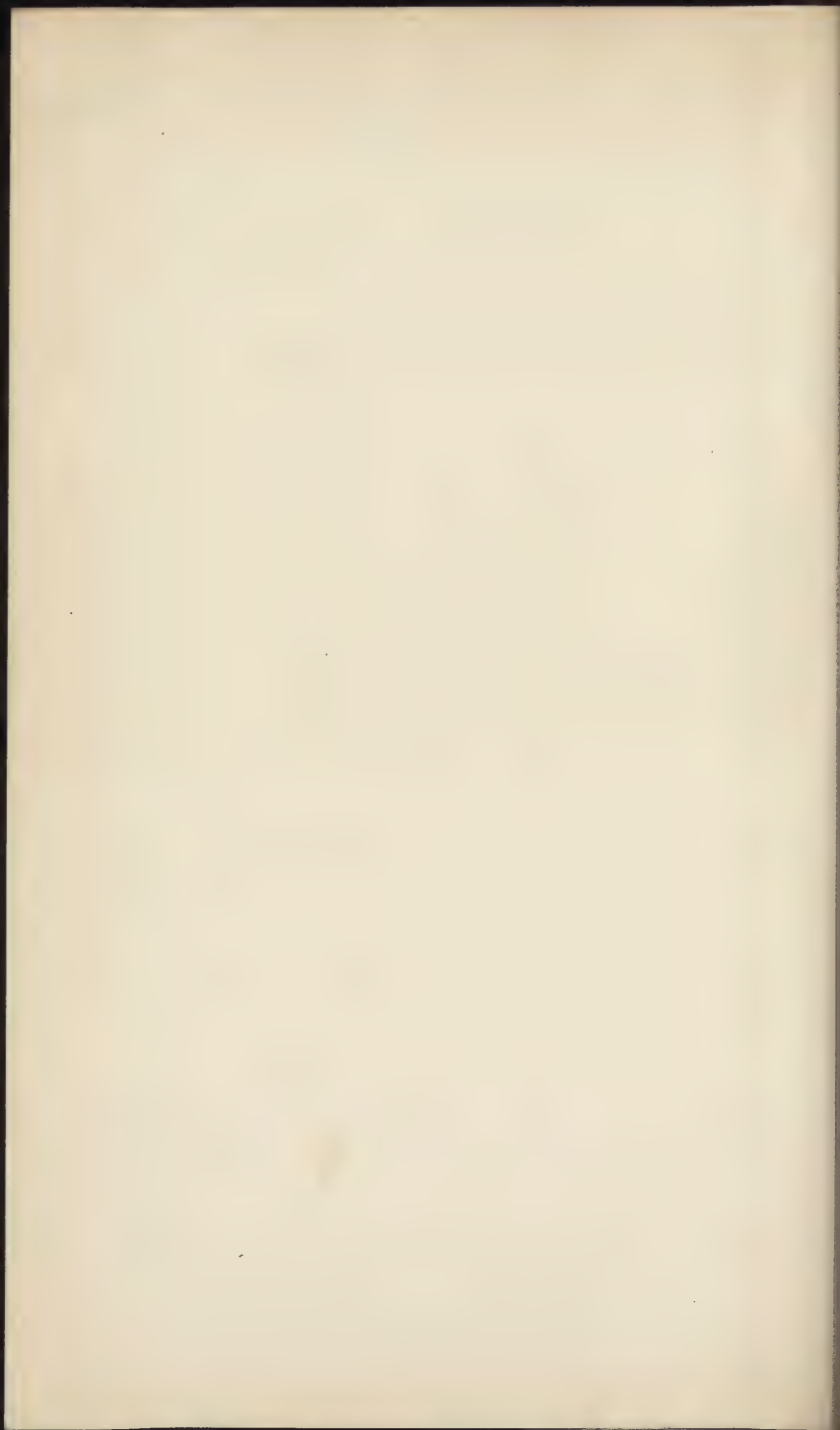


Fig. 32.

English" style, in fig. 22 of the "Perpendicular," and in fig. 23 of the "Decorated" style. Figs. 22 to 32 inclusive are examples of various styles adapted to different classes of work. Thus, fig. 24 is section AA of an angular rib, B and C being the elevators of the two sides of the rib. Figs. 25, 26, and 27 give examples of "string courses." In these A indicates the section, showing profile, B the side or front elevation. In figs. 28 and 29, A is the section, and B elevation of the rib of an arch; figs. 30, 31, and 32 show various mouldings.

THE ORNAMENTAL WOOD WORKER AND
DESIGNER.



THE ORNAMENTAL WOOD WORKER AND DESIGNER.

Introductory.

THERE are certain principles of "Ornamental Drawing and Design" which are common to all classes of "design," whatever be the material in which the designer works. What those principles are, the authors of the works in this series entitled "The Ornamental Draughtsman" and "Form and Colour in Industrial Decoration" and "The Cabinet Maker" have endeavoured to make clear to the intelligence, we trust, of the most youthful of our readers. If the instructions there given, and suggestions and hints of the most practical character, be closely attended to and followed up, the pupils will come to the departments with which the present series concerns itself, thoroughly prepared to apply their knowledge to the work of design in the ornamentation of various materials used in the constructive arts. As the branches of ornamental drawing, and the principles affecting the application of form and colour in design, explained in the papers above alluded to, are common to all ornament as applied to wood, stone, or metal, so "mouldings" may be said to be applicable to all ornamental construction. This is specially true of those branches of handicraft work connected with what may be classed as the building trades, and is yet more especially applicable to those concerned in domestic buildings. In this category we include those connected with interior work as well as those whose labours are confined to what may be called the outer shell of the building. So that in addition to the carpenter, what we purpose in the present series of paragraphs to give under the head of "Ornamental Wood Work" will address itself also to the joiner and the cabinet maker.

Chief Characteristic of the Work of the British Carpenter Sound and Solid Workmanship.

All writers on the subject of construction agree in according to the British workman the highest merit in giving workmanship of the best kind so far as stability, solidity and lasting qualities are concerned. This is known to all as "first-class work"; sometimes somewhat facetiously—borrowing a term from the well known ships register at Lloyd's—"‘A 1’ work, Sir." As a rule, this character for giving sound good work is eminently well deserved by handicraftsmen generally throughout the kingdom; although it is but right, by way of such warning as a record here of the matter may give, to state that there have been of late years whispers abroad that if the workman has not lost the "cunning of hand and eye" which distinguished his forefathers through a long, long range of years before him, he is not always ready to do his work in the same spirit which distinguished them, prompting them to give the very best they were capable of.

But while all writers have been unanimous in giving the highest praise to the work of construction in this country, they have not been, and are not now by any means, so as to the claims which this work possesses to be considered beautiful or pleasing to the eye. In construction, purely as such, we excel, or can excel if we choose to do so; in design of an ornamental character we are so far from excelling that we display but very few evidences that we even know what it means. Such is the verdict as given on this point by the great majority of those who claim to be, and have indeed good credentials to be, considered as high authorities on the subject. Without at all pushing inquiry into the field of facts as they exist around us, to see whether they would justify a verdict so disheartening as this, we may remark that it must be taken with a reservation before it is admitted to be correct. We think, for example, that it applies with greater force to some branches of work than it does to others, and that as regards one or two it does not apply at all. And this for the reason, easily and amply enough proved by facts, that in point of design as well as in construction, our workmen in certain branches will rank with the same class of workmen met with on any part of the Continent.

Contrast in Ornamental Characteristics of Constructive Wood Work of the British with the Continental Carpenter or Joiner.

For the reader will take note that in this point of excellence, or the opposite—deficiency—in design, our workmen are always contrasted with the workmen of Continental Europe; of whom the French are usually said to be the highest in the scale of creations

of beautiful objects—that is, good designs. But if the French workmen are thus considered by many as bearing away the palm of excellence in design, we nevertheless maintain that there are some branches in which our workmen in this respect are almost, some in which they are quite equal to them, and a few in which they are unmistakably superior. We do not here quote instances in proof of this. Occasion will be had again to refer more specially to the assertions we have made, in considering the details of certain departments of work. We meanwhile merely content ourselves with stating our opinion, which we believe to be amply justified by facts, and we are glad that we can do so, as to praise is, we think, always more delightful than to blame.

But while this is so, we fear that those writers who mete out censure to our workmen as failing in ability to design—not that they love to censure, but simply because they feel compelled to do it—are more than justified by what are the facts of the case in, we are constrained to say, more than one branch of constructive work. What those branches are we shall have occasion to specify as we proceed; meanwhile, we presently name one branch, being that to which, *in extenso*, we purpose to direct the attention of the reader, as affording ample scope for the censure of even the most severe of critics.

The External Timber or Wood Work of our Various Structures, chiefly Domestic or Civil, as Certain Classes of Public Buildings, characterised by an almost Total Absence of Ornamental Features.

The external parts of buildings made of timber are here considered as those capable of receiving all the value which ornamental design is so well calculated to give to them. In opening up this subject, and noting in what direction this censure is, and so amply justified, we labour under the disadvantage of having but comparatively few examples of actual construction in this country, which would act as contrastive specimens, from which we could illustrate the faults or deficiencies of the one by the good points of the other. For it is but a simple statement of the fact, that of ornamental wood work in the branches of construction we have generally referred to, there is with us an almost absolute lack. From “Dan to Beersheba,” from John O’Groat’s house in Scotland to the Land’s End in Cornwall, it might be said with almost perfect accuracy, the “land is altogether barren.” It is only here and there, and like angels’ visits, few and far between, that one meets with attempts at applying design to those parts of ordinary and general construction for which it is specially designated as adding greatly to their beauty, while in

no way interfering with their utility. We say attempts are made; but it is doubtful whether this term, with what it involves, is truly applicable. Such as they are, they look vastly more like matters of mere chance, springing up one knows not how, emanating from one knows not what. Of most of these we fear it may be said, as was said of Topsy, or rather as Topsy said of herself, in the well-known novel, " 'spects I growed."

Richness in Ornamental Design a Marked Characteristic of Continental Timber Work in Domestic and other Structures.

To know what design in wood work is, as applied to the ordinary everyday structures in which timber is used, we require to cross the Channel and take a wide survey of the various countries of the Continent. That survey has been made, to an extent not often granted to dwellers in this country, by the writer of these present pages; and he can with all truth aver that till he became practically acquainted with what almost every workman in wood—even nearly in the smallest village—on the Continent can do in ornamental wood work, he had not the slightest conception of the fine medium which ordinary wood construction affords for the exercise of design in ornament. Privileged to extend his researches over many districts widely separated from each other, and making the subject one of special inquiry and study, he was surprised and delighted with the examples he everywhere met with. And this excellence in wood work ornamented was not confined merely to what were, in point of fact, elaborate combinations of timber "in the large," but it was met with in every detail, however minute. Nor was it a feature of this department that its work was displayed in structures which were, from their size or from their cost, considered as important works. It was met with in structures of the smallest and indeed of the humblest kind. Everywhere examples were met with in this less ambitious class of work in which it was evidenced, beyond a doubt, that the workman, out of a pure love for the elegant and the pretty, if not for the truly beautiful, would not erect his structure, however simple, without throwing out upon it some marks, more or less striking, of this love. Indeed, in many out-of-the-way corners the writer met with structures which the workman had erected, with but little chance of many eyes—save his own—looking upon it; yet upon which he had lavished a true wealth of artistic design. And this not only in the general features or *tout ensemble* of the structure, but throughout all its details. Not a few cases of this kind were met with, showing beyond a doubt that the workmen had somehow got such a love of design that they could not help displaying it, even

in work which, with us at least, would be classed almost as of the meanest. And be it remembered that the workmen who produced many of these fine designs were, in every sense of the term, but what we here call "ordinary workmen."

The True Feeling in the doing of Ornamental Work which lies at the base of all True Artistic Work.

And it is worthy of note that the feeling which prompts the workman abroad to do beautiful work in the way we have alluded to lies at the root of all artistic work. He who is possessed of the true artistic spirit does beautiful work because he likes beautiful things. And he does it with as much pleasure and earnestness if he knows no one is ever likely to see it but himself. The notion of an audience, or rather of a number of spectators, never seems to concern him. He is not thinking of applause, or of payment for his work; whether he receives the one or pockets the other, or whether he receives neither the one nor the other, he does his good work all the same. Paraphrasing a well-known phrase, we may say of him that he stands as if saying, "Here I stand,—I can do no other than I do." And artistic work in the true sense of the term will never exist amongst us as it ought to exist till this spirit spreads widely amongst and influences our workmen. It is only the love of the beautiful which prompts to the execution of work considered in and by itself beautiful. And although it is quite legitimate for a workman to try and "better himself" in the world, as the phrase goes, by having a knowledge of design, he may rest assured that if this be his only motive he will never occupy aught but a very subordinate position in the ranks of designers. As the doing of duty in every rank of life is the first consideration—come what come may, this and no other—so, unless the art workman be imbued with a love of the beautiful for the sake of the beautiful, he may profess to be a designer, but a designer in the highest and truest sense of the term he never will become.

Exceptions to the General Lack of Ornamental Features in our Timber Work.

In saying, as we have already said, that of work of this kind our country is altogether barren, we did not intend to convey that we had purposely or otherwise overlooked the fact that there are some exceptions to the statement. But we do not hesitate to say that these are truly exceptions, and that the rule is as we stated it. Our position, in point of fact, is precisely that of the writers we have alluded to, who maintain that while our workmen excel in construction, they fail miserably in design. In averring this it is not, of

course, understood that they deny, or would if put to it deny, that there are some—very many—workmen who show power in design as well as skill in construction. All that they mean—and it is much—is that as a rule their criticism is amply justified. So, in like manner, while admitting, and gladly, that there are not a few specimens of fine designs in woodwork to be met with amongst us, we do aver that as a rule there is an almost universal lack of it. Indeed, keeping to the general class of ordinary, or if the reader prefers it, common work, and comparing it with the same class abroad, this might be said with all safety—that the art of design in wood, as applied chiefly to external work, does not exist in this country. And this does not ignore the fact that there are specially good examples designed by able architects for special and generally costly work. Nor does admission of this fact in any way disturb—certainly does not destroy—the rule as we have stated it in the baldest, plainest way.

Popular Artistic Taste, or the Lack of it, the Cause of the Low Condition of our Timber Work, ornamentally considered.—Its Reaction on the Practical Workers.

As we have said, its truth can be proved any day and anywhere—proved negatively, if not positively. Only that the truth is not popularly observable, as in the popular mind there does not exist any recognition of the fact that a want exists. What one does not know of or think about one does not wish for. And if we do not miss examples of beautiful work around us, that in all probability arises from the fact that we do not know what the beautiful is. This, indeed, is one of the most cogent reasons which exist for what is called art education. This does not consist, as some seem to think it does, in merely teaching pupils the rudiments of the art, or even going far beyond this, but it includes a cultivation of the beautiful, a desire to have it and to exercise it amongst the people generally. In truth, this cultivation of a taste for the beautiful is that on which a desire to be able to execute beautiful work is based. For the very first step we must take in the acquirement of any branch of knowledge is to become acquainted with the fact that we are ignorant, and that it would be the better for us if we had knowledge. The first step to acquire anything is to be aware of the fact that we lose something by having it not. There is no satisfaction so supreme that things are right like the satisfaction which the truly ignorant possess. We make the first step in getting them to acquire all the inestimable advantages of knowledge when we get them to perceive that they are losers by the lack of it. We may educate, as we term

it, any number of art workmen by the rules of art, and get them to excel even in the details of its practice. But this is not art in the highest sense of the term, any more than it is knowledge which so many scholars in our schools have when they leave school crammed only with facts which they may be able to repeat well enough, but of which they can make no use, simply because it is only the mere faculty of repetition or of memory which has been exercised, not the intellectual faculties which grasp the true meaning of their "lessons."

Recent Improvements in the Popular Taste in regard to Beautiful Work.

Much of this which we have said lies really at the root of the movement known as the cultivation of a taste for the beautiful amongst the general population—that is, amongst those who have no practical or business connection with artistic work as a calling, nor are even likely to exercise it as an accomplishment. This cultivation of a taste for the beautiful has been and is still advocated by many, on the simple ground that by having it they will be all the higher in the scale of civilization; and possess a new intellectual, and in itself a pure pleasure—leading to a desire to leave and to dislike the lower and grovelling pursuits and tastes which in truth affect so many of our people.

We have just stated that the cultivation of a taste for the beautiful had a tendency to make people dislike and leave off grovelling pursuits and tastes. And so much has been done in this direction that we have every hope that vastly more can and will be done. It is no vain boast for the advocates of this higher education to say that a more healthy because a sounder notion of what constitutes the beautiful in objects around us, and which we use more or less in daily life, has taken possession of all classes, of all ranks and conditions of men. It has permeated from above downwards till almost the poorest classes display some, and in a few cases even a high degree of appreciation of what is beautiful and pure—which is in the highest degree satisfactory, and which if it be not all that is to be desired, or indeed only in reality but a small advance in the right direction, is nevertheless an enormous advance on what existed a generation ago. The term "art manufacture" now means something, and carries something practical with it, not merely to the halls of the wealthy, but to the "huts where poor men lie." No doubt the term "art manufacture" has been much abused, and it would be well for us if it were not so frequently abused now. Under the shelter or the authority of its name much is produced which, however good its claim to be considered as a "manufacture," has not the shadow of a claim to be classed as "art." Much has been

made or manufactured, which in no true sense has been designed. Notwithstanding which, however, it is beyond all dispute, as we have said, that a vast improvement has taken place in the public estimation of what constitutes the beautiful. Even in poor cottages, articles which were supposed to be ornamental, and those which were simply considered to be useful, but all of which were hideously ugly, have been, during the last few years more especially, supplanted by objects which have in many cases some fair pretension to the possession of good design—in some few really do possess it.

Causes which have brought about an Improvement in Popular Taste in regard to Beautiful Things in Construction.

The various agencies which have been at work aiding the efforts of those who desire to raise the standard of popular taste in every walk of daily work, and in every branch of daily life, have without a doubt effected, as we thus see, on all sides great improvement. Our numerous exhibitions have done good service in this respect, not merely as exciting emulation in the various departments of business amongst those who are practically engaged in carrying them out, but they have made us acquainted with what was done by other peoples, markedly those on the Continent. And the lessons they taught us have been so well learned that in some departments we now excel our teachers. But that we have from them much yet to learn, those know best who are best acquainted with what the Continent has yet to teach us. And it is a suggestive consideration, and one which curiously enough bears in the closest possible way on the immediate subject of the present section of this series of papers, that it is just the one which has been the most poorly represented or illustrated in the numerous exhibitions we have held in this country; and to which contributions from the Continent were sent so freely. The art of wood design and execution has, so far as we know, scarcely been represented at all, judging it by the highest standard. And one has to go abroad and travel far and wide, with observing eye and thoughtful mind, before one can form any conception to what a point of practical perfection it has there reached.

Wide Field for the Study of Ornamental Construction in the Timber Work of the Continent.—A Practical Contrast.

And it is only those who have had the opportunities which such observant travel can alone afford, who are able—by having in their possession the power, so to call it, of contrast—to know to its full extent the poverty of our workers in timber in respect to the application of design to the labours of their hands. To one this knowing what has been done, what is being daily done, in countries not so

very far separated from our own, makes it, to say the least, somewhat depressing—some would say humiliating—to witness so many opportunities presented to our workmen for displaying their knowledge of design totally overlooked and neglected; opportunities which, if availed of, would in many instances give the people “things of beauty,” which the poet has well said are things of “joy for ever,” and in all might at all events please the eye and gratify the taste, where now they only offend and shock. This does not hold true only of what may be called the main work of ordinary structures; it holds equally true of the larger and more pretentious structures in which as much money has clearly been expended; some small extra amount of it might reasonably have been forthcoming, to add to all the stability of sound construction which they assuredly display, some at least of the wants and claims of good design. There is a well known city in the kingdom which prides itself, and justly so, on the number and magnificence of its stately structures in the most perfect style of workmanship, and of the finest and purest stone. In this city a public company has erected a structure for the accommodation of the public. Deciding—wisely or not we do not pretend to say—not to absorb much of their funds in the use of material costly to purchase and more costly still to work, they have chosen timber as that of their structure. In point of working plan to suit the wants of the public and of their own business, in point also of soundness of construction, the structure leaves nothing to be desired. But in point of that design which appeals to the taste and pleases the eye, it is, notwithstanding that it faces one of the noblest of streets and one of the grandest of natural objects with which a city can be blessed, neither more nor less than “hideously ugly.” True, there is an attempt to give the form or outline of the building some look as if “design” had to do with the origin of the structure; but there has been such an evident forgetfulness—if not possibly an ignorance—of the canon or rule in design that each material dictates or ought to dictate its own peculiar characteristic of constructive treatment, that it would have been much more satisfactory if the structure had been even plainer than it is, and been lacking altogether in those details which it possesses, and which are presumed to be decorative. For this very attempt at design serves only to make the lack of all true principles of design the more painfully obvious. A well constructed shell with plain surfaces, and pierced with the usual bald “voids” for doors and windows, would have at least been a thoroughly honest-looking structure, devoid of the pretension which the attempt at design gives to it. And if, as we have shown, the structure in its *tout ensemble* or general appearance betrays a lack of true design,

it is scarcely necessary to say that there is an utter absence of design in special details: those details which, when well worked out in design, give a general graceful lightness and an elegance of form which wood or timber properly—that is, artistically or æsthetically—treated is so well calculated to give.

Practical Lessons to be derived from the Foregoing.

We have been thus careful to give the particulars of this example of an important wooden or timber construction, as it presents a fair specimen of what our designers so called in timber construction, and our workmen do, or rather wholly fail to do. It does not stand alone by any means: we could cite many more cases of a like character, but we content ourselves by merely further alluding to the timber “offices” of a wealthy and energetic public society, which in point of design *en bloc* and in detail deserves everything which has been said as to the structure above criticised. And such examples, too numerous as they are, perform what may be called a painful mission, for seen by thousands they perpetuate as it were totally false views of what artistic and æsthetic design should be, whereas they might, differently treated, do much to promote a love or a taste for the beautiful, and add so many more to the educational examples which in other directions—as in our museums, markedly that noble one at South Kensington, and at our technical and art schools—we fortunately have. We have also drawn attention to those examples of how timber should *not* be dealt with, with the special purpose of contrasting the style of treatment so general in this country with that seen on all sides on the Continent. To this we have already made general allusion, to which we may add this special one. In our various rambles abroad we made, amongst other matters of professional interest, this subject a special study in detail, and looked out therefore for every example from which we could obtain hints as to the artistic or æsthetic treatment of the material. Nor had we any difficulty in finding such examples; and we found them, as we have said, not only in places more or less public, and where there was some incitement to the designer to give good work, in view of the larger constituency of critics he addressed, but also in remote districts and in obscure positions where there was little chance of public approval being met with, so that it was simply that love for the beautiful, or that æsthetic taste which will not permit ugly work to be done, which must have been the ruling motive for the execution of the work. Not seldom have we come across some tiny structure of a railway station serving some little hamlet, a mere wooden shed in point of accommodation and size, yet so treated, both in the

general design or plan, as well as in every minute detail, that it was a delight to look upon, and could not fail to act as a perpetual teacher, so to say, of what was beautiful in form and outline. The same was observable in domestic structures, some of which were special examples of what were really fairy-like dwellings—so light, so graceful, and altogether so elegant in their general effect. And these were not always ambitious structures in point of the internal accommodation they afforded, the owners of which were possessed of much money to lay out in gratifying their taste. In many instances they were mere cottages, tiny blocks for people evidently of small means; but yet in all of them there was evidence of a love of the beautiful, some of them being specially attractive.

Beautiful or Pleasing Effects in the Ornamentation of Wood Work obtainable at comparatively Little Extra Cost to that demanded for Plain Work.

If it be true that a structure in brick or stone may be built so that it be pleasing to the eye, for an expenditure no greater than that which a house positively ugly in outline would demand; so also in timber it may be held to be true that a pleasing design may be had at as little cost as one unpleasing.

In the last paragraph we stated generally that in timber structures could be as cheaply obtained of pleasing design as those which were unpleasing. This is true, at all events, of the plain or general outline of the structure. And as regards the point of details, at but a very little extra cost very beautiful effects may be obtained. And why people should grudge a little extra cost in making the outside of their dwelling-place a "thing of beauty," while they will go to even a lavish expenditure in filling the interior with objects of beauty—at least at much cost *aiming* at this—we confess that we fail to see. Let it be remembered that a structure perpetuates either beauty on the one hand or ugliness on the other, and that as a monument of the one or the other it is *constantly* staring us in the face, "in our going out and in our coming in." And if this one fact be borne in mind, it ought to influence us in making our permanent abode that which is pleasing to the eye and gratifying to the taste. Nor let it be forgotten—what is, however, but too frequently overlooked—that in this we owe a duty to our neighbours. It is all very well to say that each man has a right to do "that which is pleasing in his own eyes." But this right has its limits, and to a man of a well-constituted mind the truth is ever present that his public conduct—so to call it—shall be so guided and directed that he will not willingly "give cause of offence" to those he dwells amongst. And it shows a sad defect in the æsthetic estimation of

the popular mind when numbers prefer an ugly to a beautiful thing; or, as we perhaps should put it as more correctly stated, that they are ignorant of what constitutes the difference between the positively ugly and the actually beautiful. Nor does it the less argue a sad defect in the *morale* of the popular mind when numbers claim as their privilege, and assert it in their work, that they have a right to erect structures which are painful perpetuations of all that is grotesque or hideously ugly.

Practical Value of the Foregoing Considerations in relation to Ornamental Construction or Decorative Design of All Kinds.—The Position of the Young Artist in reference to Design.

Such considerations are so far from being out of place here, that they have the closest possible bearing upon the present section of the subject named in the title to this series of papers. For it is not enough that we give, as we propose now to give, what may be called the alphabet of design in timber construction. This is necessary, but something more is required. For although a pupil may be taught to read—that is, have a knowledge of what may be called the mechanical part of the art, so that he can tell each letter, and pronounce or read any, however complicated, of their combinations—it rests with himself that he reads so that he understands. The teacher has, so to say, provided him with the bricks or stones by which he can erect a building, but it is the pupil who must put them together in proper fashion. So, although we give in succeeding pages what we have called the alphabet of design, the pupil must not suppose that a knowledge of its elements constitutes design proper. To exercise this, the pupil must think for himself, must cultivate a love for the beautiful, and to do this he must observe and closely study in various directions. What those are he will find detailed in any good treatise on “Ornamental Drawing.” And we have also indicated in the foregoing remarks in this section some other points which should influence and guide him in his practice. The whole subject of art education is so wide, embraces so many points of special importance, that after all that may be said, complete as it may seem to be, something more, it is felt, remains to be given. The subject is one which, after receiving the elements, the pupil must in fact think out for himself. There is in this, as in all departments of knowledge, no “royal road” to its attainment. The way is often very rough, always more or less difficult to be trodden; and, like one who is ascending a mountain, the object seems about to be attained, when further advance only shows that it is farther off than ever. It is not given to every one to reach the

mountain top, but it is given to every one that if he chooses he can at least have a desire to leave the valley, remembering that each step taken is a step which places him on a higher standpoint than he occupied before, from which he can command a wider prospect and breathe better and purer air.

**Points connected with Artistic Design as Applicable to Constructive Work.—
The Method of Treating the General Subject of our Papers.**

We have this further by way of introductory remarks to notice: that the examples we give are to be taken more as suggestions for practice in design, than the actual details to be rigidly followed. This is the outcome, indeed, of what we have said as to what constitutes true design. We leave the pupil to design his own combinations of the elements of the art as applicable to any particular work he has in hand; we give the foundation—the pupil must on that rear the superstructure. The design, as such, must be his “very own.” We are far from saying, however, that the examples we are about to give are to be taken for, or useful only as, suggestions of design in detail. We may very easily claim for them a higher utility than this. For being taken almost in every instance from examples of executed work abroad, either from sketches of our own taken on the spot, or obtained from the many and special sources of information open to us, they may with all safety be accepted as details which may be executed in our practice of construction. They must, of course, be used with judgment, if used at all in this way, and be taken so as to preserve a unity in the design as a whole whatever be the leading characteristics of its details.

General Characteristics of the Ornamental Work of the Carpenter or Joiner.

Following out the subject opened up in the preceding paragraphs—namely, that of ornamental wood work—we proceed to the consideration of that department of it which deals with the details of the art. These details, of course, when put in position, or *in situ*, make up in combination part of the structures the general design or form or outline of which will be in another place discussed. It does not follow that those details, more or less ornamented, are to form part of a building wholly constructed of timber. They may be used in conjunction with and be employed to give a graceful elegance to structures of the more durable materials of stone and brick. Some notion of the effect of this combination may be obtained by an inspection of the design—specially prepared by us for the purpose—given in fig. 1 (frontispiece).

The General Form in which Timber is used for Ornamental External Wood Work.

So far as these details are concerned, the ornamentation used to give the æsthetic or artistic effect aimed at is obtained by two methods of treatment of the wood. This for details is for the most part used in the form of planks or deals. The one is employed in the body of the plank, the other along one or other of its edges. The ornament in the body or face of the plank or piece of deal appears in the form of perforation—that on the edge or outer line as what is best described by the popular term “scalloped.” The work is thus simply effected by cutting, this being done in the small scale by hand, in the large by machinery. The latter work gives on the Continent rise to a special trade the members of which supply to builders and carpenters a wide variety of planks or deals cut according to different designs. The trade or art of the trade is in France known by the name of *Bois découpé*, or, as we should term it, “cut wood.” The pleasing effect obtained by treating wood used in construction in this fashion may be illustrated in detail by fig. 3,



Fig. 2.

and in combination in the design in fig. 4, and in figs. 5 and 7, Plate XVI.

Practical Examples.—Simple Elements or Details of Ornamental Wood Work.—Flat Surfaces.

Fig. 2 may be taken as illustrating the very plainest way in which it is possible to present a part of a structure, as for example at the horizontal lines of eaves boards, or the angular lines of a gable. Contrast this with the very next or most simple advance which can be taken in its ornamental treatment, and the pupil will admit that there would be something more pleasing to the eye if the bald plain edge of *a b*, fig. 2, were treated throughout by a repetition of the exceedingly simple ornament in fig. 3. Still more would this effect be obtained in the next advance, as the design shown in fig. 3, and still more so in figs. 5 and 7, Plate XVI. The *tout ensemble* of the edge of a board, plank or deal, treated with some pretension to artistic design, may be gathered from fig. 6, Plate XIX., which is in design of a very simple character. A more ornate example is given in fig. 7, Plate XX.

Continuation of Examples in Detail.

In this a further advance in the artistic treatment of the wood is observable; for we have the two features formerly alluded to—namely, the perforation in the body of the board, as at *a a*, with the treatment of the edge or outer line at *b b*. The effect of perforation in a higher ratio of advance is given in fig. 5, Plate XVI. And here will be noted how the extreme edge, as *a b* in fig. 2, given above, of a flat board may be treated, as at *a a* in fig. 2, Plate XX. In place of cutting the edge up into scalloped parts, as in fig. 5, Plate XVI., the whole edge is treated throughout so as to form a pleasing curve from one end to the other. Or rather it may be said that it starts from a central point and extends right and left. Further illustrations of edge treatment are given in other Plates, and contrasts

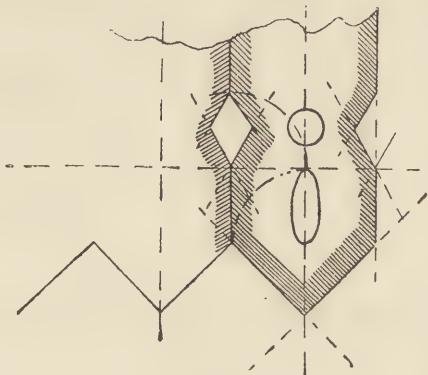


Fig. 3.

between those and fig. 2, which any one could do, may be made with advantage. Perforated work, as for a panel in the lower part of a garden structure or summer-house, is further illustrated in fig. 7. So also is this class of work illustrated in figs. 3, 4, 6, and 11, Plate 1.

The Foregoing Examples of Detail Ornament in Wood Work contrasted with Plain Bald Surfaces of the same Extent or Size generally.

We do not say that these drawings show perfect design; but, in many respects very good, they would form, beyond a doubt, a much more pleasing feature in a timber structure, than bare, bald, flat surfaces of boarding, or even with such parts pierced with plain meaningless apertures, when apertures are desired. But where apertures even of the simplest form, as squares and circles, are formed

in boarding perforated work—as for the ventilating apertures at the upper part of structure—the mere disposition of these holes, simple as they are in themselves, may give an effect, pleasing or otherwise,

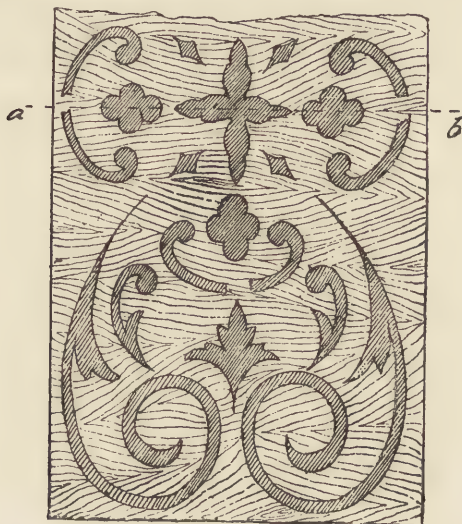


Fig. 4.

according as the disposition of the apertures is arranged. Thus the drawing in fig. 5 shows as simple a form of aperture as can well be found, but the disposition being harmonious gives a pleasing effect.

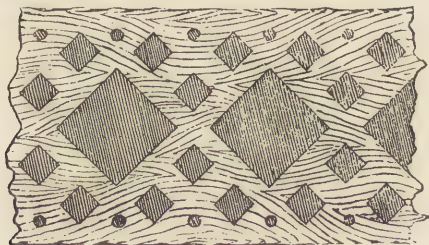


Fig. 5.

This is further seen in fig. 6 where simple squares are alternated with curved parts, and with diagonally-placed rectangles forming crosses. The larger squares set diagonally might be filled in with a

panel, also perforated, as shown in fig. 5, Plate XVIII. In fig. 4 the apertures are largely circular in form, mere holes forming a chief part of the design; yet the disposition of the simply formed apertures being harmonious, a pleasing effect is obtained. What can be more simple, considered as individual members, than the apertures in fig. 7!—yet how effective the disposition as a combination!

Ornamental Wood Work in Brackets.

Let us now take two classes of work in timber or wood construc-

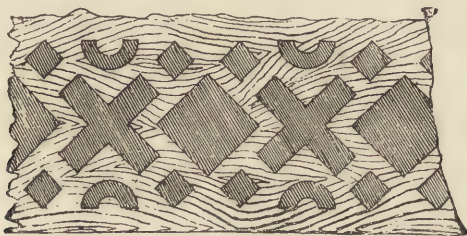


Fig. 6.

tion, and the pupil will be able to judge whether our strictures in a preceding paragraph were well founded or otherwise, and whether there be not some scope for the work of "the ornamental designer" in connection with it. Should he still require further evidence, however, on these points, we must beg of him to accompany us to the end of this section. Take the case of a bracket, *a a*, as in fig. 8,



Fig. 7.

supporting what is called a "cantaliver," *b b*, projecting from the face of a wall, *c c*. This bracket *a a* would do its work well if strong enough, however plain its outline is; but if this were altered to the form shown at upper part of Plate XV., it will be admitted that a more pleasing effect would be obtained; still more so in fig. 5, Plate XX., as curved lines are more pleasing than straight ones, and a combination of straight lines with curved ones is always effective.

Ornamental Wood Work—Balcony Front.

Let us next glance at another class of work in ornamental wood construction—taking for example a balcony front. This may be

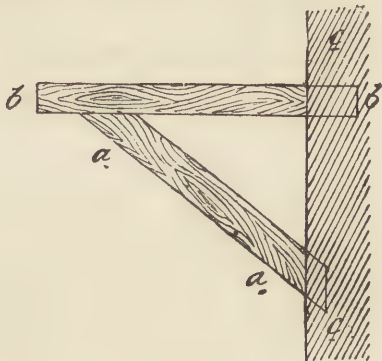


Fig. 8.

made up of plain solid boarding, perhaps crowned with a simple cornice, or it may be inclosed within simple rails of wood with plain

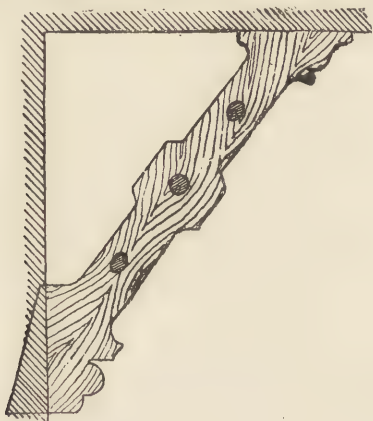


Fig. 9.

rectangular spaces between. Or it may be, still advancing in design, treated as perforated work, based on some one or other of the designs we have given, or as on those we shall have yet to give.

Or it may be treated in some such a style as in fig. 1, Plate XX., or in a still more advanced style, as in fig. 5. This last is a window-flower balcony, and is frequently a feature in Continental architecture, where flower culture is everywhere carried to great perfection. This design of *jardinière*, as it is called, is a specially pleasing one; we are indebted for it to the pages of the fine work edited by M. César Daly, architect of Paris, and entitled "The Domestic Architecture of the Nineteenth Century." The design itself is from a house in Strasburg by M. Schlagdenhaussen.

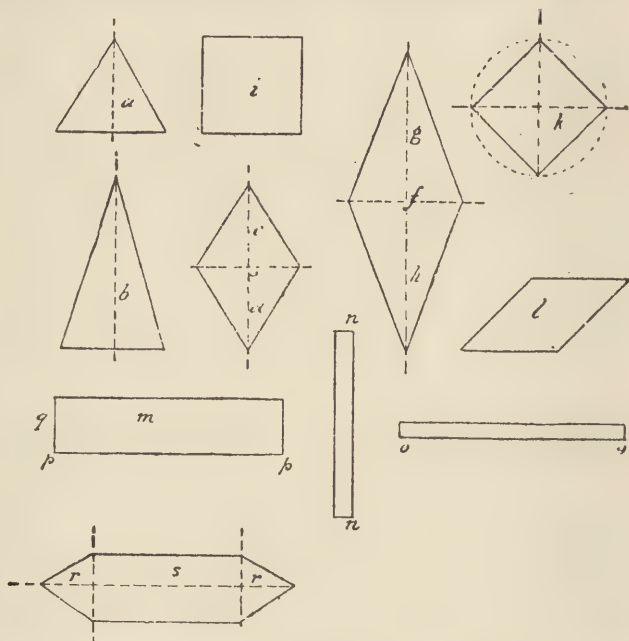


Fig. 10.

The Elements of Ornamental Work in Timber Designing and Setting out of Different Figures and Forms.—Ornaments based on the Triangle, the Square, and Rectangle.

Having in the preceding paragraphs opened up the subject of ornamental wood-work, we now proceed to give details which may be considered as the elements or alphabet of the art. We shall begin with perforations, which, as sketches yet to come will show, play a very important part in the decoration of wood-work for

various structures. The elementary forms of perforations are divisible into two classes—the combinations of right or straight lines, and of circles and parts of circles. The chief of these forms we severally illustrate in figs. 10 and 11, those in fig. 11 belonging to the circle.

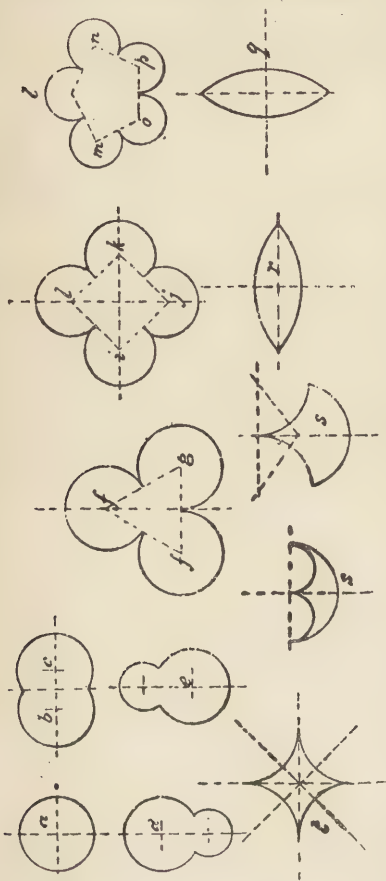


Fig. 11.

In fig. 10 the simplest is that of the triangle, three lines, the fewest which can be employed to form a surface or an inclosed space. The two triangles available for the purposes of perforation are the equilateral, as in *a*, having the three sides of equal length, and the isosceles, as at *b*, having two of the sides equal. By joining two equilateral triangles, as *c*, *e*, *d*, at their base, another form of straight or right lined perforation is formed; and another by joining two isosceles triangles at their base, *f*, as *g* and *h*.

The "square" perforations form inclosing sides—all at right angles to each other: this set, with its base, as *i*, horizontally, forms a perforation which may be deemed ugly; but a very material improvement is effected by setting the base, as *k*, at an angle, this forming what is known as the "diagonal square"—sometimes the "lozenge," which latter name is given also to the perforations at *c e d*, *f g h*. When the sides of the square are not at right angles to each other, as

at *i*, fig. 10, last section, but as at *l*, the perforation assumes the form of a "rhombus," which is in fact the lozenge square in *k* in another position.

Another four-lined figure is the rectangle or parallelogram, as at

m. When this is used as a perforation it is generally very narrow—that is, the base, or length, as *pp* in *m*, is very much greater than the height or breadth, *q*, as shown at *nn*, *oo*. When the rectangle is broad, as at *m*, it is made to assume a more pleasing outline in perforated work when the ends are treated as at *rr* in *s*; this is done by adding two equilateral triangles, as at *r*, *r*; or two scalene triangles, as at *b*. When the angles are not right angles, as in the rectangle or parallelogram at *m*, but as at *l*, in which none of the angles are right angles, the perforation is termed a “rhomboid” in form. We shall see presently how those simple elementary forms may be combined in perforated work; meanwhile glancing at the

Ornamental Arrangements based on the Circle.

Simple forms of the second class of elementary perforations, as in fig. 11. The simplest form is of course the complete circle, as at *a*. When used in this form it pleases the eye best when of small diameter, and still better when used in combination with other perforations more or less elaborate. A combination of two circles or parts of circles is shown at *b* and *c*, *d* and *e*, and of three at *ffg*—which is termed the “trefoil.” The “quatrefoil” perforation is at *ijk*, and “cinquefoil” at *lmnop*. A combination of two arcs of a circle forms another perforation, as at *q* and *r*; of three at *s*, and of four at *t*.

Ornamental Forms of Combination of Right-lined Figures.

Although right-lined perforations are rarely used alone in perforated work, still a pleasing effect may be obtained by their combination. We show in the succeeding illustration a few of these combinations,—and this is not done with a direct view that they should be adopted in practice as we give them—although, in combination with other more elaborate perforations in which circular or curved lines are met with, some of these would be very effective. But we give them chiefly to initiate the young designer into the very varied and in some instances complicated designs yet to be illustrated—leading him gradually up from the simplest to the most complex arrangements of straight lines and curved ones.

Thus, in fig. 12 *aa* illustrates a combination of very narrow rectangles: see *nn*, *oo*, in fig. 10, which we have there named as by no means a pleasing perforation if used wide, as at *m*. This vertical arrangement is sometimes very effective, even when used alone—as forming, for example, a “band,” or string course between two more elaborate sets or perforations. A great deal of the effectiveness of this arrangement depends upon the due proportioning of the width

of the perforations themselves, but also of the spaces between each two contiguous openings. The vertical direction lends itself obviously

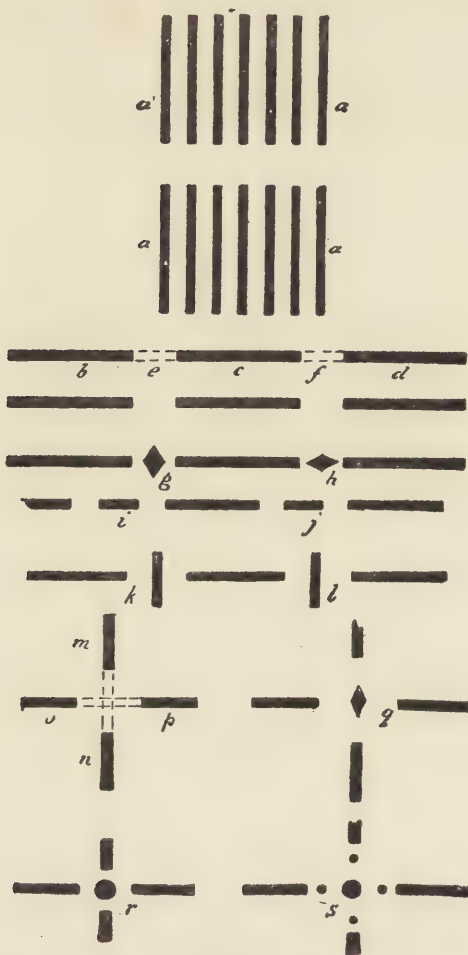


Fig. 12.

with greater ease to a continuous arrangement of perforation of this simple form than the horizontal. The best horizontal continuity is

where a single perforation runs along, as at *b c d*. But this has to be separated by full spaces, as at *e* and *f*, otherwise it would assume the form of a mere horizontal slit or slot. In place of having these spaces solid, as *e* and *f*, by filling in this with a perforation lozenge form, as at *g* and *h*, a certain pleasing effect is obtained—and this

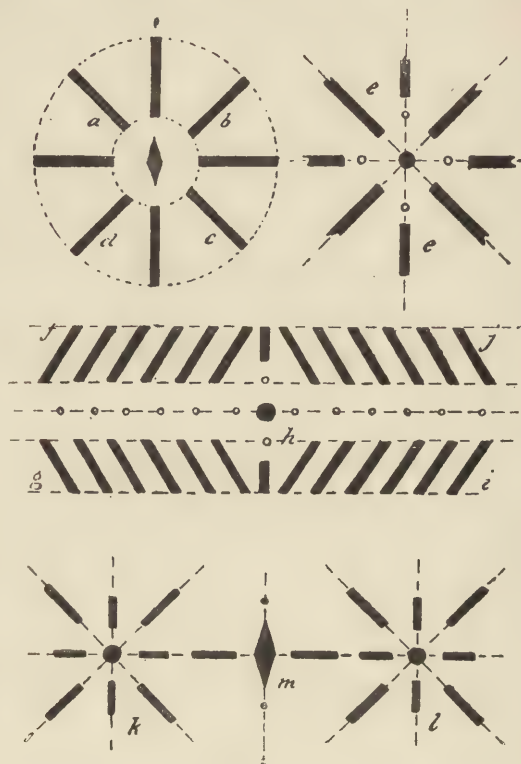


Fig. 13.

even where a simple shortening of the perforation is made, as at *i* and *j*. Or perhaps a still more decided variety, and this as it is more of a contrast, is filling in the blank spaces, as at *e* and *f*, by short perforations of the same form, but placed vertically, as at *k* and *l*. An arrangement of narrow rectangular apertures is shown

in which two are vertical, as at *m*, *n*, and two horizontal, as at *o* and *p*. They are placed equidistantly from a central point common to them all. If this central space, in place of being solid, be opened up with a perforation as at *q*, a certain degree of pleasing variety is introduced. This may be varied in the same line or band in which the arrangement, as *m n o p*, is repeated, by having the central space opened by a circle, as at *r*; a still higher grade of pleasing variety being obtained by a cluster of small circles round a central larger one, as shown at *s*.

In place of dealing with the rectangular openings, disposed either horizontally, as at *a b c d*, or vertically, as at *e*, or in combination of those two positions, as in *m n o p*, or *q*, *r* and *s*, by giving them angular or oblique positions we introduce a new element of combination. This is illustrated in fig. 13, in which, to the same arrangement as

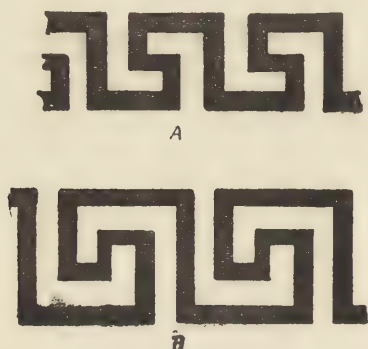


Fig. 14.

is given at *q*, fig. 12, angular or oblique perforations, as *a*, *b*, *c d*, are added. This is also added to the same arrangement shown at *r*, in fig. 12, and as at *e e*, fig. 13. In this figure the angular or oblique arrangement of the rectangular openings is further illustrated, as at *f*, *g*, the openings sloping, so to say, in reverse directions. The arrangement is repeated on the other side of the central part *h*, as *i*, *j*, the openings, *i*, being in reversed position as compared with *f*, *j* with *g*. An arrangement of angular perforations is shown at *k* and *l*, these being repeated along the band or line; and each "repeat," as the technical phrase is, being separated by some such arrangement as at *m*. Some of the ornaments called "frets" afford good illustrations of the effect produced by combinations of straight lines:

**Further Examples of Combinations in Ornamental Effect Suggestive to
the Young Designer.**

The principle of combination of straight-lined perforations or apertures in connection with the elementary forms of this class may be further and usefully illustrated as leading the young designer of work of this kind to think out combinations; for if he does so well in simple, he will be so much the better able to cope with the difficulties of the more advanced subjects we have to put before him. Let us take the triangle or three-sided perforation, as at *a* in fig. 10. By arranging the triangles in line, as at *a b*, and giving another line, as at *c d* in fig. 15, so that the apices or points approach each other, the bases being at the lower and upper sides of the band and parallel thereto, a certain pleasing variety of perforated band may be obtained; the central space between the two rows or lines of triangles being opened up with simple perforations, as at *ef*, or the triangles may be alternated as at *a' a'*. The triangles may be arranged in concentrated or closer combination to form a "centre part," as at inner part of last diagram to the right hand at top, the bases being towards the central point—or as at *h h*, where the apices are towards the centre. By introducing triangles placed with the bases in an oblique position, as at *ij k l*, another variety is obtained.

As showing the pupil how often a good effect, or at least what as a new feature may be obtained, by simple means, and as inducing him to think out even such an insignificant form as a triangle—not much artistically in it—we give the following. In place of cutting the triangular space fully out from a triangle—strictly speaking two sides of it, as the base is wanting—by the proper inclination of two rectangular apertures or slots, as *m n*, meeting in point *o*, arrange those as shown at *pp*; and the pupil will perceive that as an arrangement of simple straight-lined apertures there is a pleasing variety obtained, and which gives a nearer approach to what is popularly called a "pattern," although it may not be so readily designated by the higher and more pretentious term "design." Yet design it is, if that word—as it assuredly does—involves a "purpose" or design with a definite object in view. (For some remarks upon the term "design" see the section entitled "The Cabinet Maker.") In place of having the central space in *pp* solid, it may be opened up by perforations as at *q*; and if *pp* is to be a "repeat" along a band, the repeats should be separated by some simple perforation, as at *r*. Where a large-sized opening is required, the arrangement of the triangle known as the isosceles (see *b*, fig. 10) may be used. The simple perforations as at right-hand lower side of fig. 15 will add variety and relieve the formality of the arrangement. But

formality or precision is always a feature of all straight-lined forms, and can only be got thoroughly rid of by graceful curved lines.

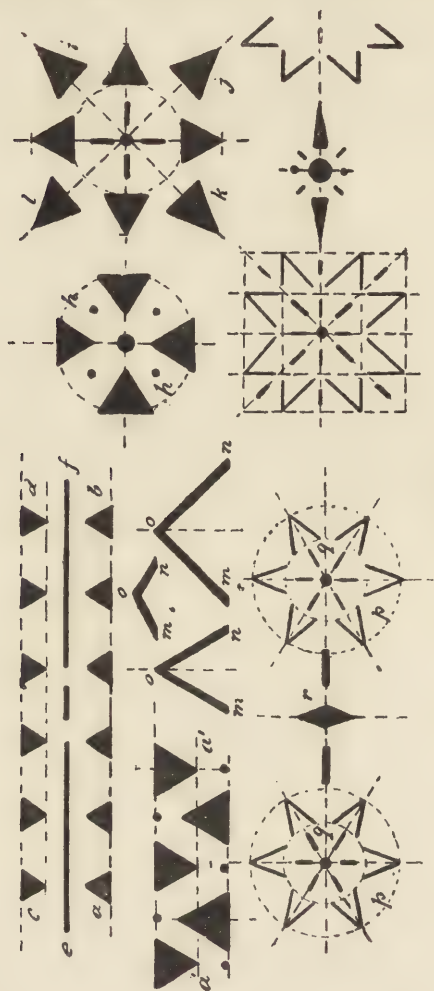
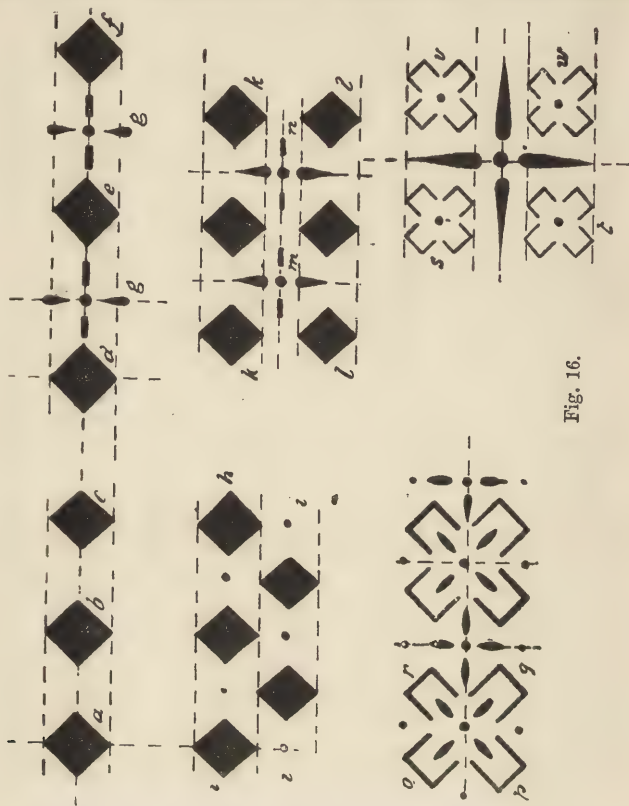


Fig. 15.

Further Examples of Straight-lined Ornamental Arrangement.
Still following up the elementary forms given in fig. 10, as

conveying excellent practice to the pupil in "combination" of straight-lined forms, and giving him the best introduction to more complicated work, we take the other forms in fig. 10. Not much can be done with the "square," as at *i* in this figure. If used by itself, or in line, it should never be placed with its sides parallel to



a double row, as at $h\ h, i\ i$, another effect is produced, which may be added to by the introduction of simple circular openings between. In this arrangement the openings are said to be "interspaced" or "alternated," the lower row of squares being arranged so that each square in it occupies or falls into the space between two of the upper row. The converse arrangement is shown at $k\ l$, where the points of both rows approach or are opposite to each other. The spaces between may be left solid, or better still opened up as shown at m and n . The square may be used in part cutting to form an opening, as at $o\ p\ q\ r$, and this form may be combined, as at $s\ t\ u\ v$.

The combinations which may be made out of the elementary form of straight-lined figures, as in the "lozenge," $d\ c\ e$ or $h\ f\ g$, fig. 10, are illustrated to some extent in fig. 17. The dispositions of this

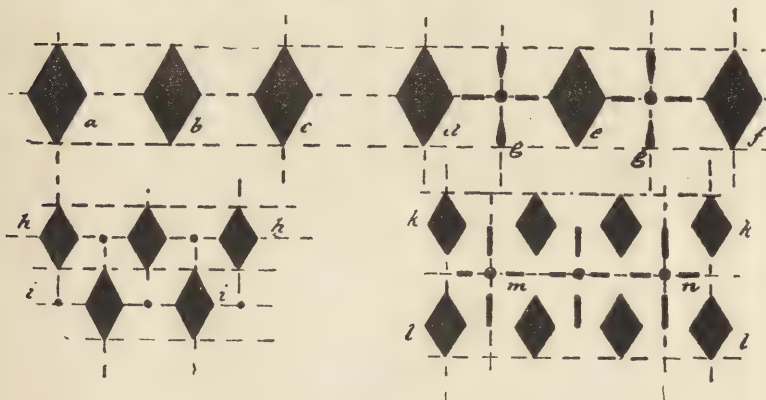


Fig. 17.

figure in $a\ b\ c$ and $d\ e\ f$ are the same as in the first four diagrams in the preceding figure, 16. Where this form is used in constructive arrangements to make a "centre-piece," one method of obtaining this is shown in fig. 1, Plate I., another at $a\ a$ in fig. 3, Plate XVI., and a still more pleasing arrangement at $b\ b$ in same figure. When spaced out along a band at equal intervals, the intervals, in place of being left solid, may be opened up with some simple arrangement of perforation such as at $d\ d$ or $e\ e$. In figs. 4 and 8, Plate XVIII., we give figures combining some of the elementary forms already given. Figs. 9 and 6, Plate XIX., are other arrangements of angular lines for perforated work. Of course the workman will have, in cutting out these spaces, to stop short at certain points; this gives a solid part to hold the whole together. If the spaces were cut continuously

the parts would simply be cut out, leaving a large hole. This stopping short will be noticed in all the diagrams we have given, as it will be seen in those yet to be given.

Taking now the forms as at *r r s* in fig. 10 (*ante*), we shall glance

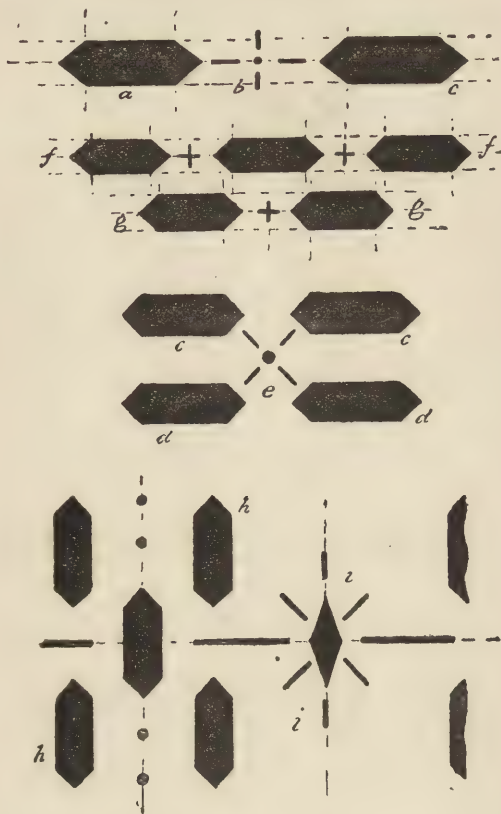


Fig. 18

at a few of the combinations which may be made of them. The form in *r r s* is simply a rectangle with equilateral triangles at the ends, and may be arranged in simple line, as at fig. 18, with some simple openings between the spaces. Or they may be arranged in

double line, as at *c c*, with openings as at *e*, in the central space. A more pleasing variety of the double line or row is at *f f*, where the forms are "interspaced" or intervallic, *g g* falling between the intervals or spaces of the upper line, *f f*. A clustered arrangement for a centre-piece is shown at *h h*, and when spaced out along the band may be divided at openings, such as at *i i*.

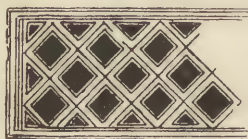


Fig. 19.

Taking now the rhombus form in *l*, fig. 10, we give some combinations of it. The perforations may be arranged in line, the angle or inclination being from left to right—or in opposite direction, as at the upper part of the diagram. Or a line may be formed with the

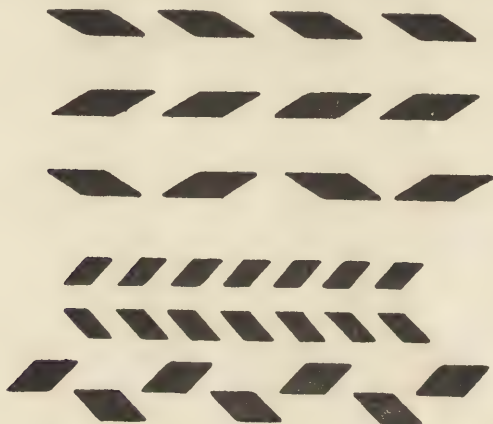


Fig. 20.

angles alternated, as at the centre of the diagram. Or, if a double row be used, still with the angles alternated, this double row would look more effective if the forms were "interspaced"—placed between or below the spaces. Fig. 5, same Plate, gives a very effective combination, as for a centre-piece of the rhombus, combined with the diagonal square. Fig. 20 gives another arrangement of the rhombus.

In fig. 19 the square set diagonally is the basis of the ornament, while the square and the rhombus make up that of fig. 21.

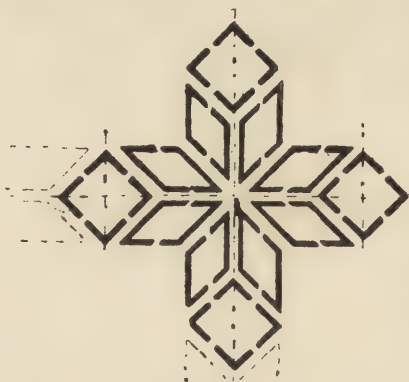


Fig. 21.

Combinations of Circular Lines in Ornamental Arrangements.

Turning now to some of the combinations of circles and circular forms as given in fig. 11, comparatively little can be done in the way

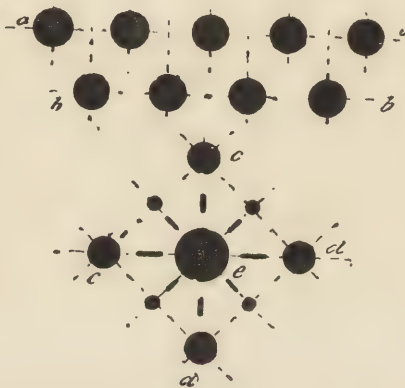


Fig. 22.

of combinations of pure or complete circular perforations. Circles of small diameter may be combined to form a single line, as at *a a*, fig. 22, or as a double line with the circles interspaced, as in line *b b*.

Or for a centre-piece to alternate in a band with these lines, the diagonal arrangement, as *cc*, *dd*, may be adopted with a central and larger circle, as at *e*. Or the series of circles placed diagonally may

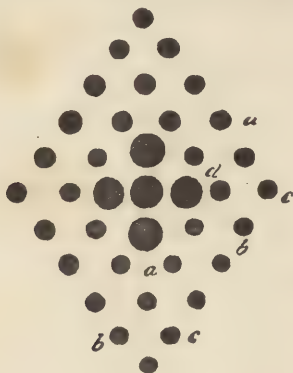


Fig. 23.

be used, the circles taking the place of the diamonds (see also fig. 23). It is when we come to combinations of the circle that we meet with forms of a wide variety, that variety becoming, of course, practically endless when we combine circular with straight lines—as in every

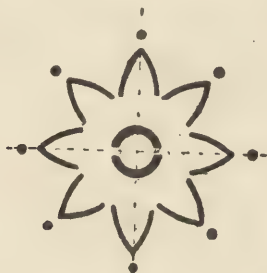


Fig. 24.

form, however complicated, there are only two classes of lines, the straight and the curved. Ample illustration is given of this in the diagrams in Plates XVI. to XX. inclusive.

THE END.

MOULDINGS.

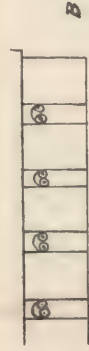


FIG. 1.

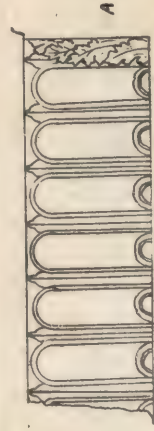


FIG. 2.

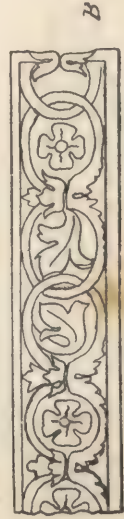


FIG. 3.

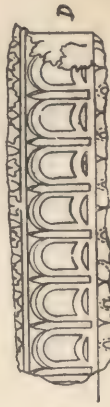


FIG. 4.



FIG. 5.

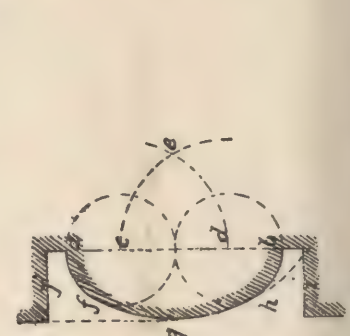


FIG. 6.

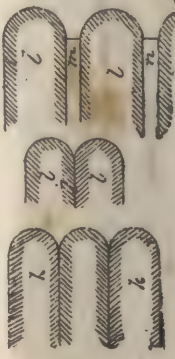


FIG. 7.

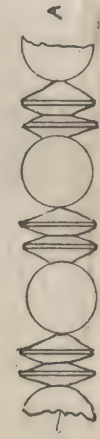


FIG. 8.

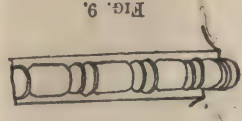


FIG. 9.



FIG. 10.

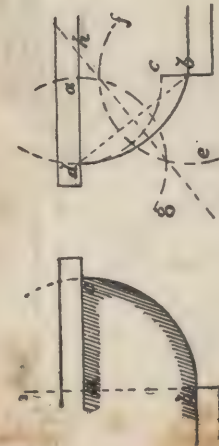


FIG. 11.

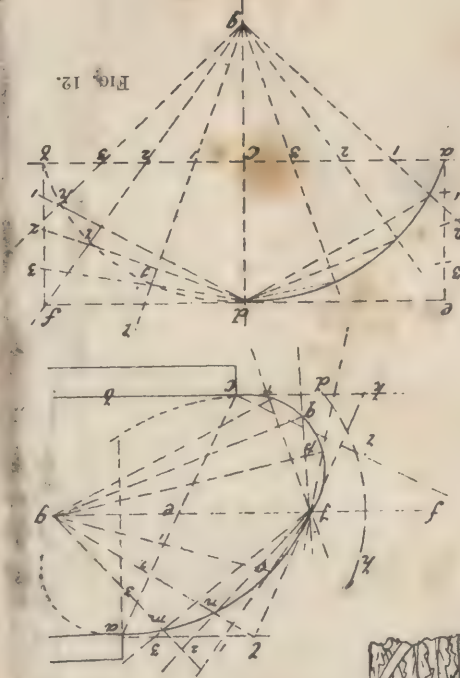


FIG. 12.

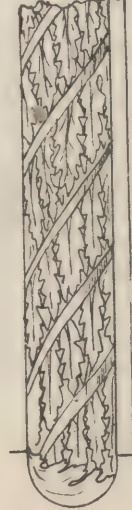


FIG. 13.

MOULDINGS.



FIG. 1.



FIG. 2.

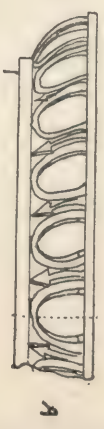


FIG. 3.

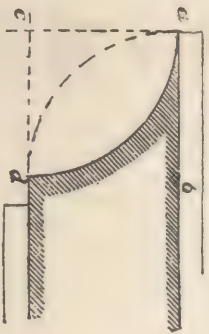


FIG. 4.

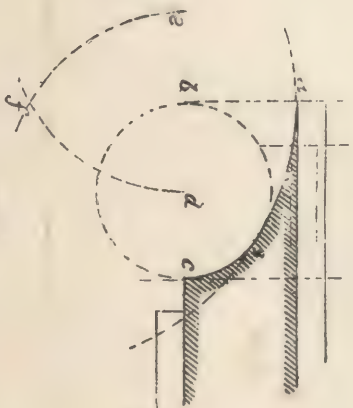


FIG. 5.

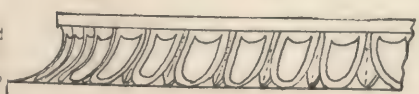


FIG. 8.

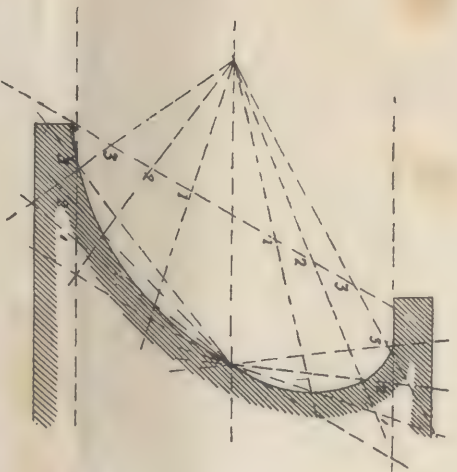


FIG. 6.

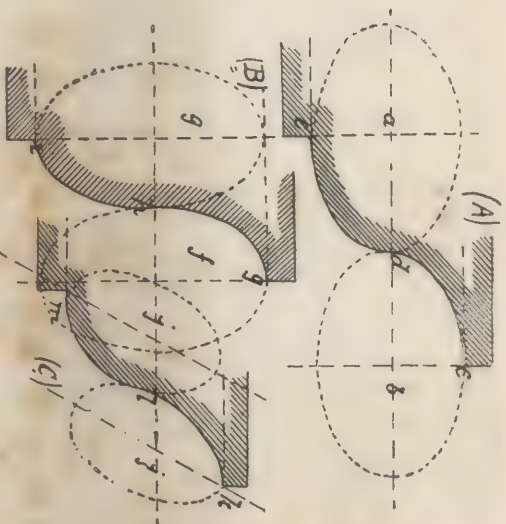


FIG. 9.

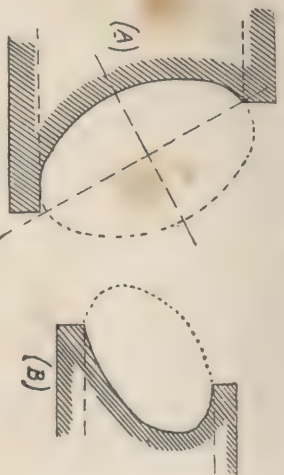


FIG. 7.

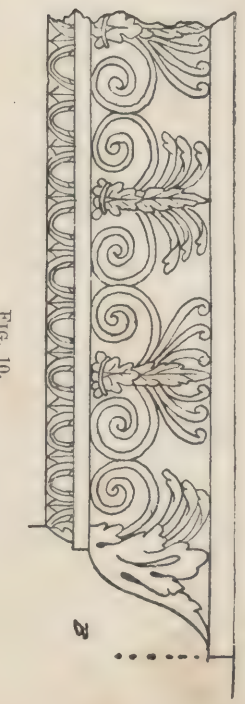


FIG. 10.

MOULDINGS.



FIG. 1.

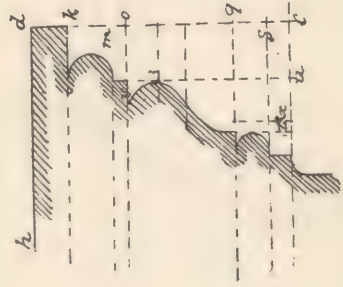


FIG. 2.

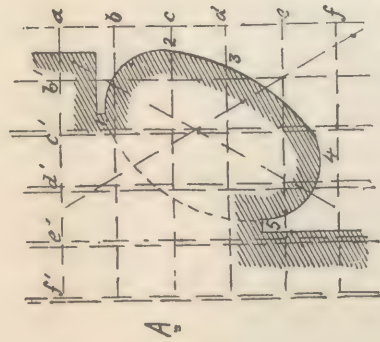


FIG. 4.

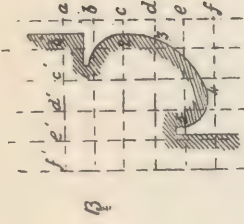


FIG. 5.

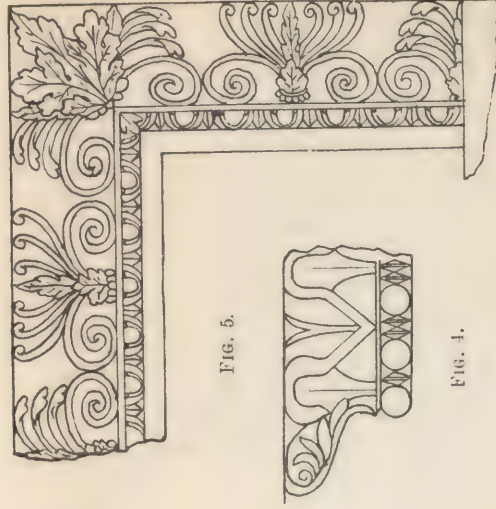


FIG. 6.

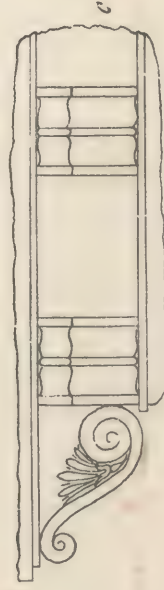


FIG. 7.

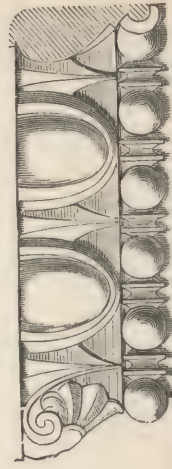


FIG. 8.

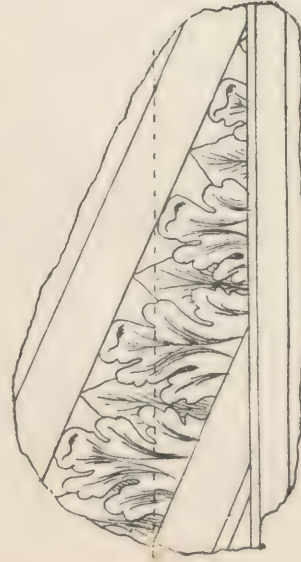


FIG. 9.



FIG. 10.

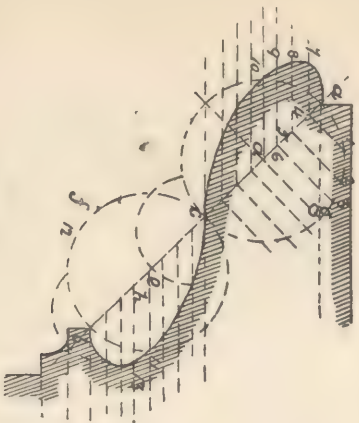


FIG. 1.

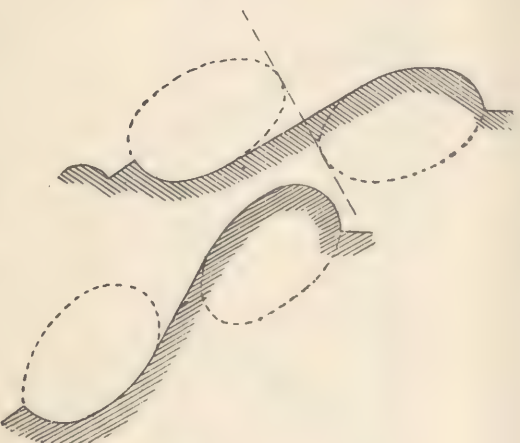


FIG. 2.

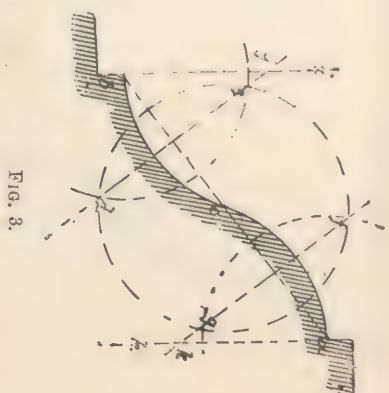


FIG. 3.

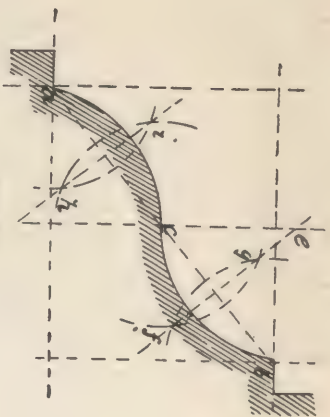


FIG. 4.

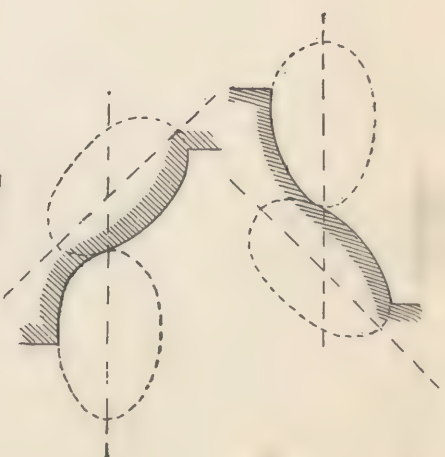


FIG. 5.

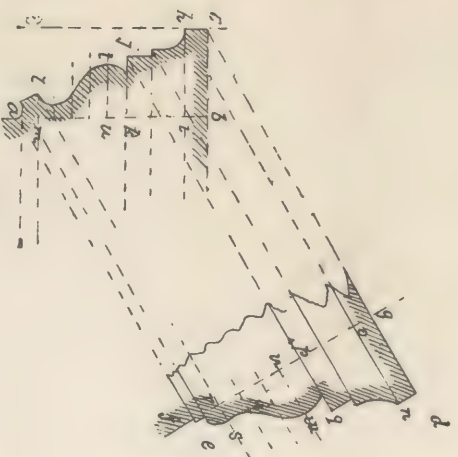


FIG. 7.

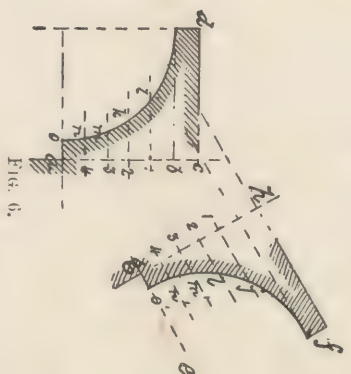


FIG. 6.

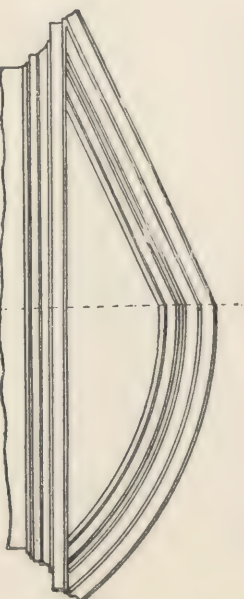


FIG. 8.

MOULDINGS.



FIG. 1.



FIG. 2.



FIG. 3.

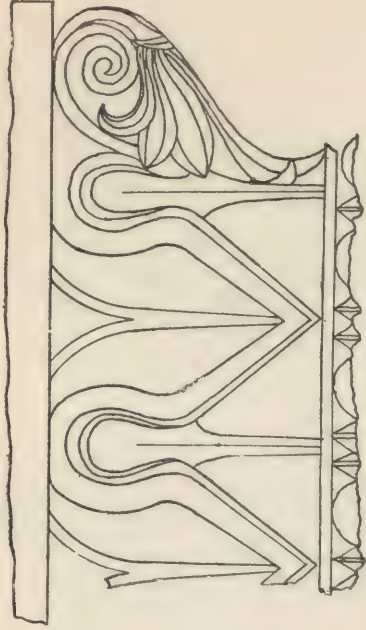


FIG. 4.



FIG. 5.

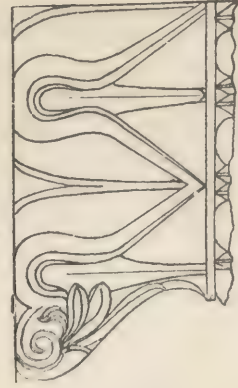


FIG. 6.

MOULDINGS.

ARCHITRAVES, FIGS. 1, 2, 3, 4 (FIG. 1 DOUBLE-FACED ARCHITRAVE); FIGS. 5 AND 6, SASH BARS.

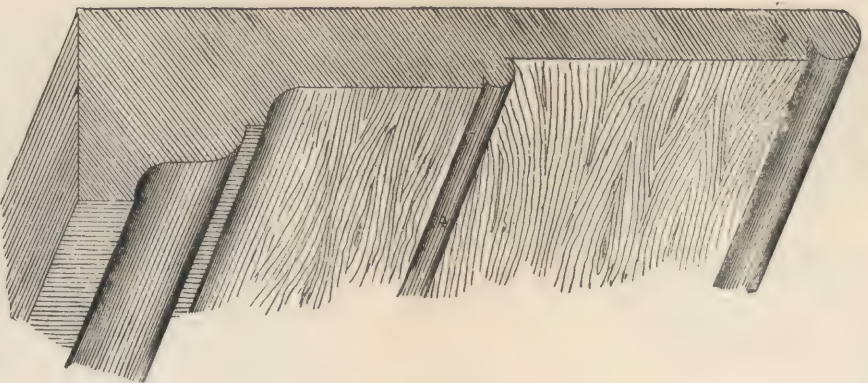


Fig. 1

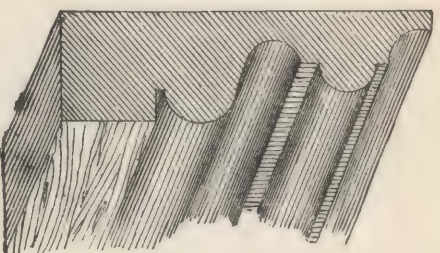


Fig. 3

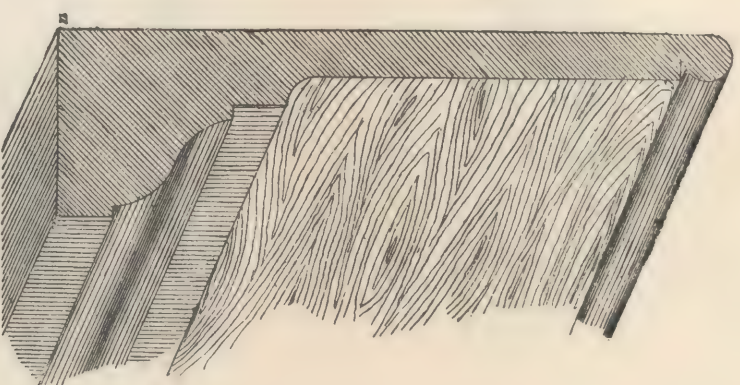


Fig. 2.

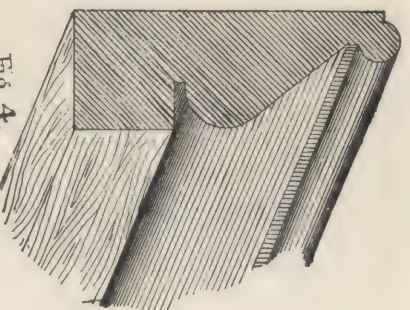


Fig. 4.

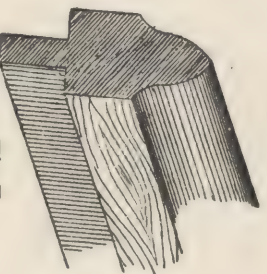


Fig. 5.

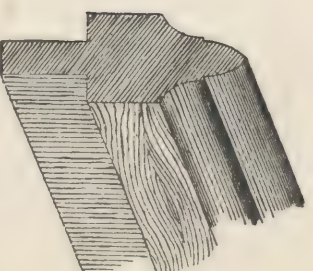


Fig. 6.

MOULDINGS.

BASE AND CAP MOULDINGS.

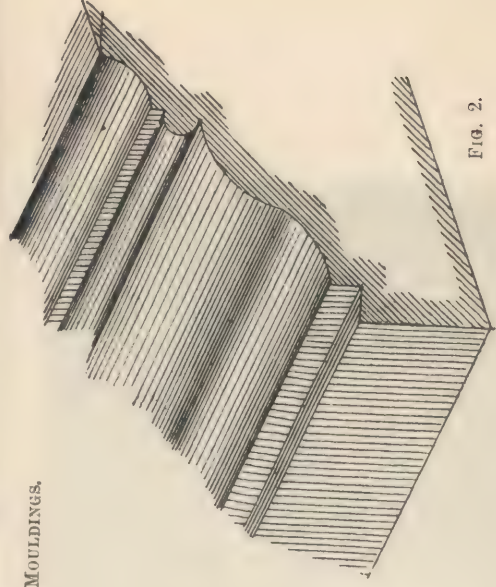


FIG. 2.

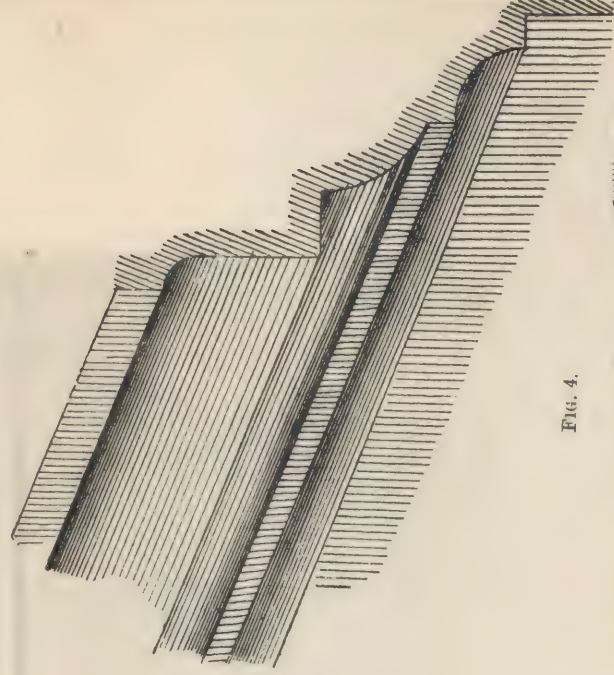


FIG. 4.

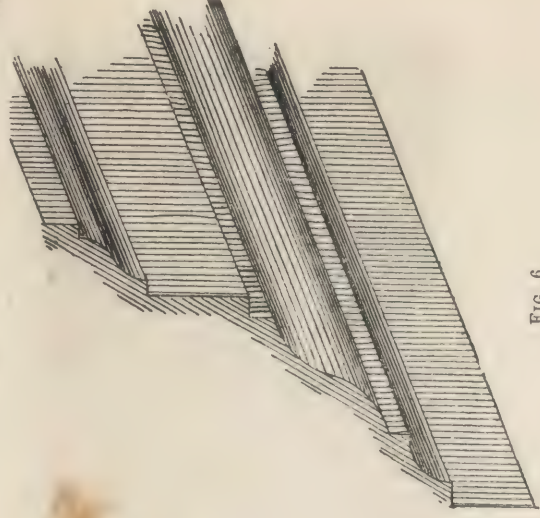


FIG. 6.

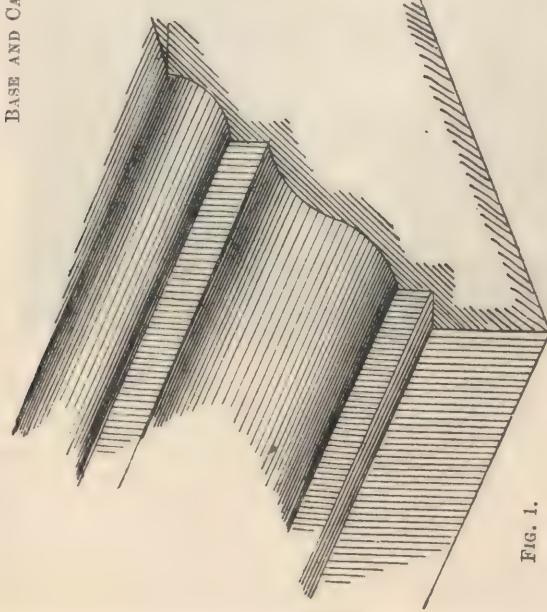


FIG. 1.

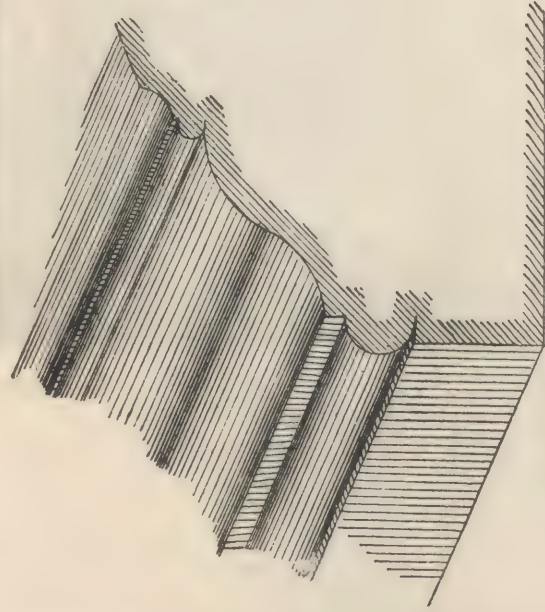


FIG. 3.

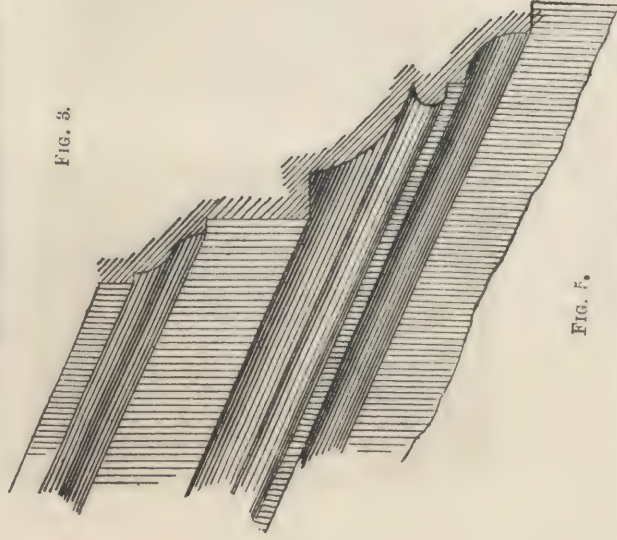


FIG. 5.



FIG. 1.



FIG. 2.



FIG. 3.

THE CABINET MAKER.—ELEMENTS OF CABINET MAKING.

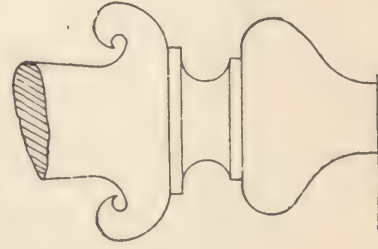


FIG. 2

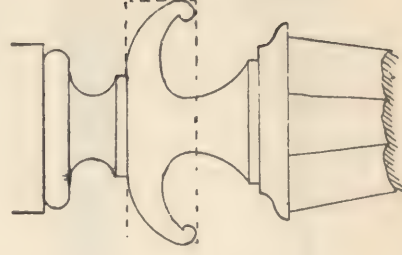


FIG. 3.

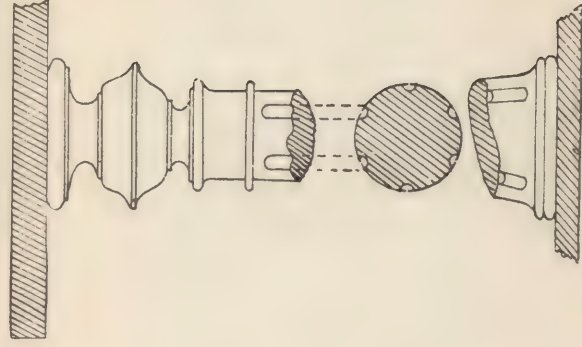


FIG. 1.

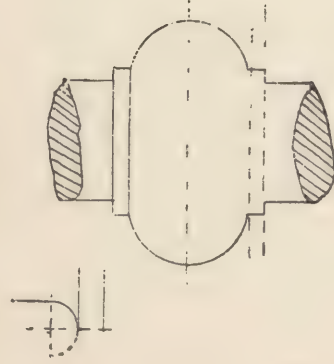


FIG. 4.

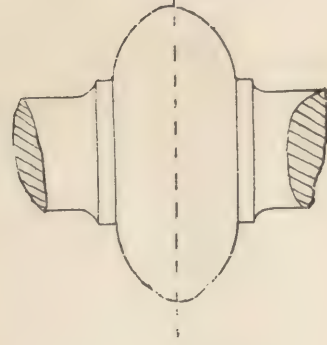


FIG. 5.



FIG. 1.

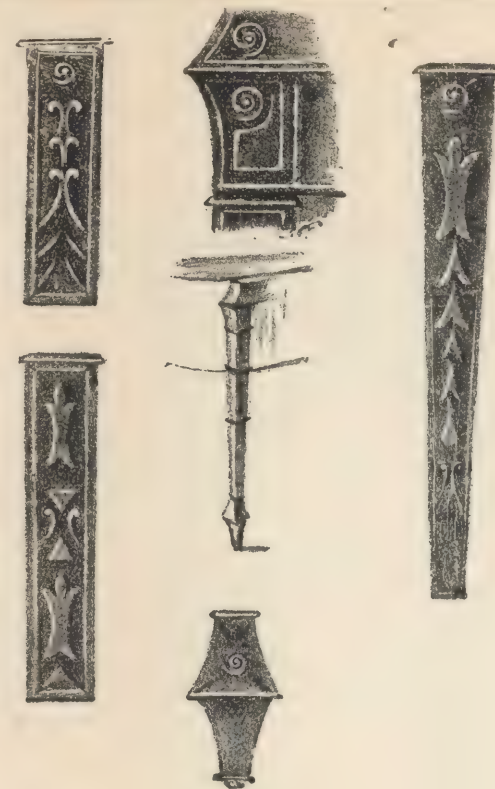


FIG. 6.

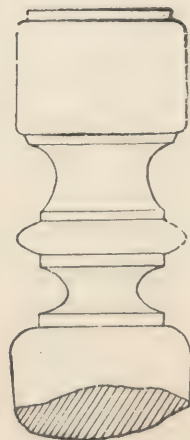


FIG. 2.



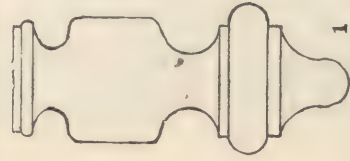
FIG. 3.



FIG. 4.



FIG. 5.



1

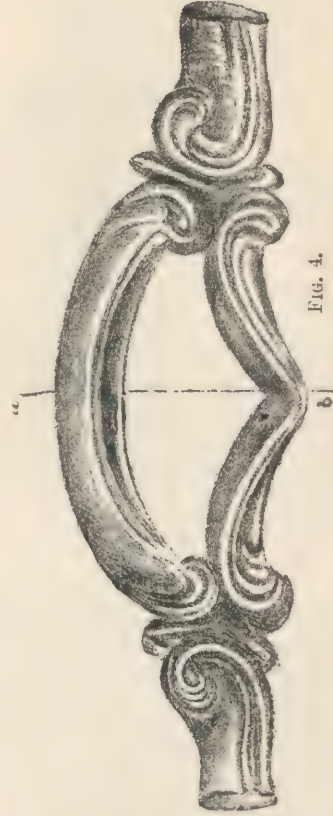


Fig. 4.

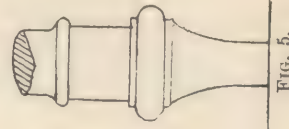


Fig. 5.



Fig. 2.

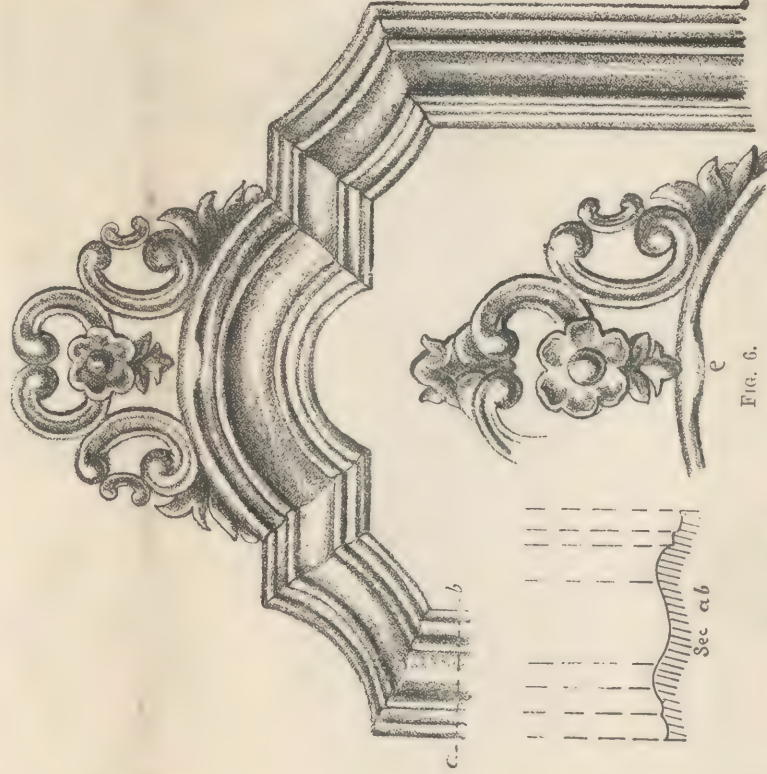


Fig. 6.

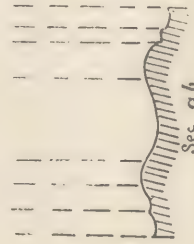


Fig. 7.

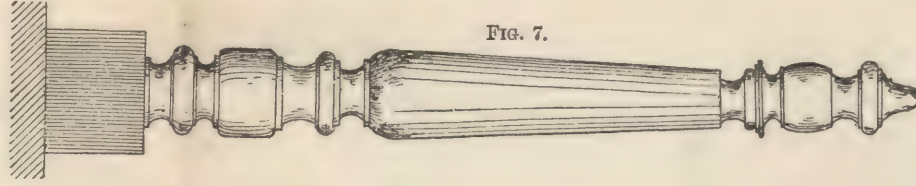


Fig. 3.

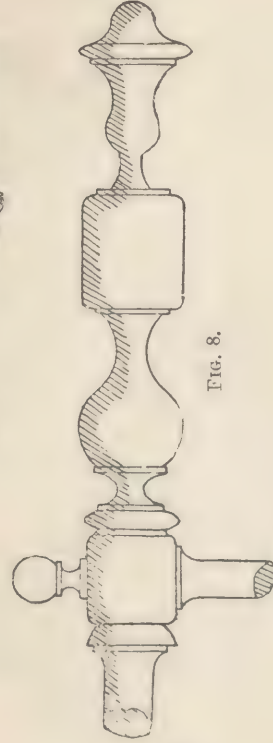


Fig. 8.

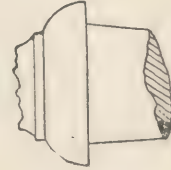


Fig. 9.



Fig. 10.

THE CABINET MAKER.—ELEMENTS OF CABINET MAKING.

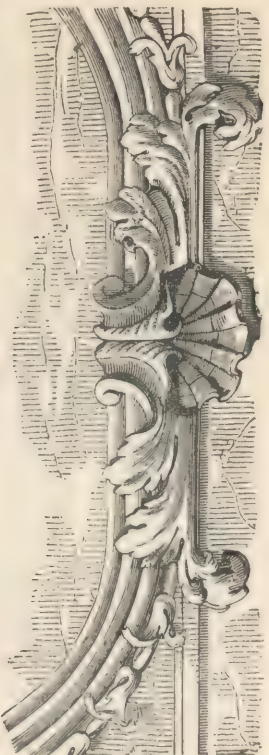


FIG. 1.

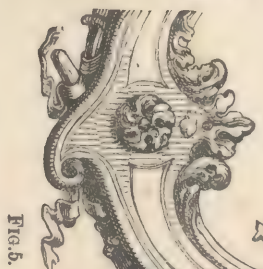
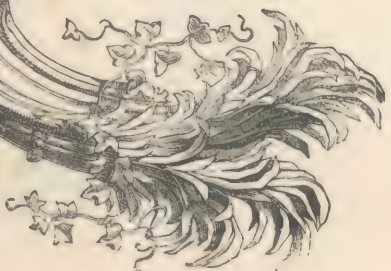


FIG. 5.

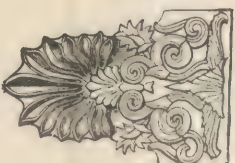


FIG. 4.



FIG. 3.

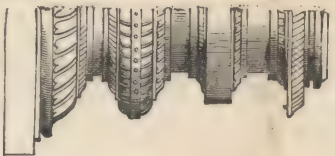


FIG. 2.

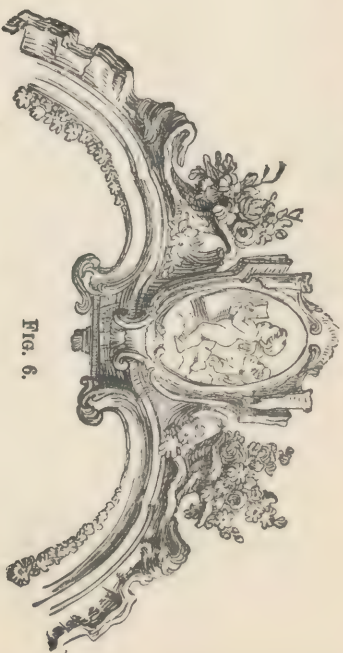


FIG. 6.



FIG. 7.



FIG. 9.



FIG. 8.

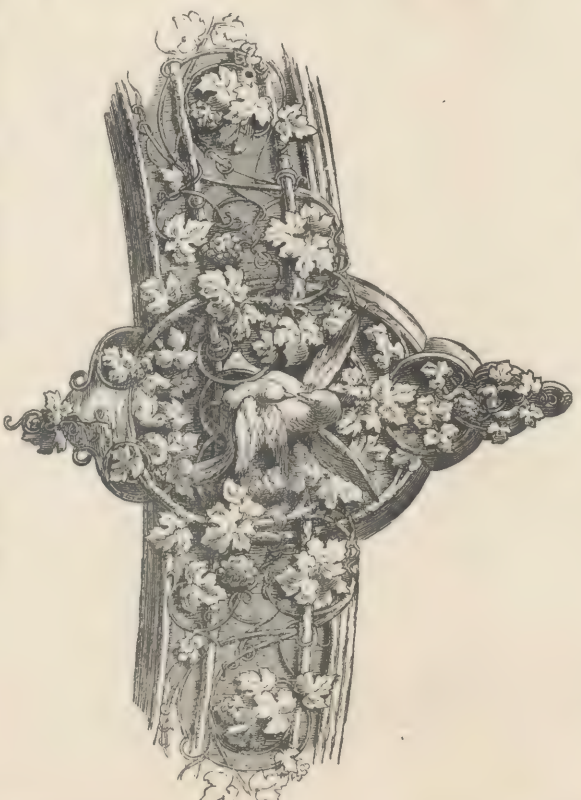


FIG. 10.

DETAILS CHIEFLY IN CARVED WORK.

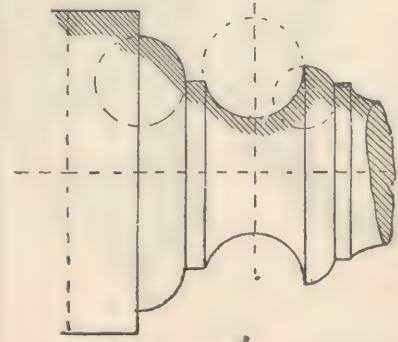


FIG. 1.

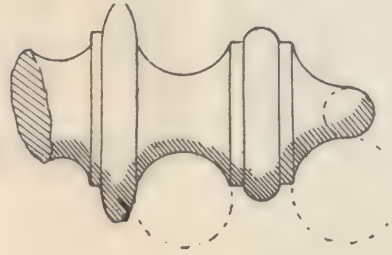


FIG. 2.

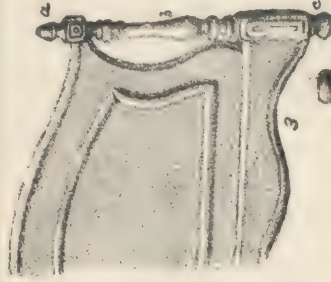


FIG. 3.

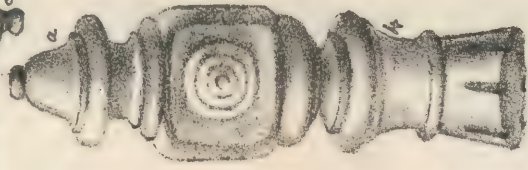


FIG. 4.

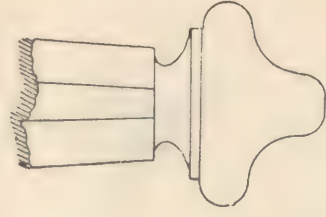


FIG. 5.

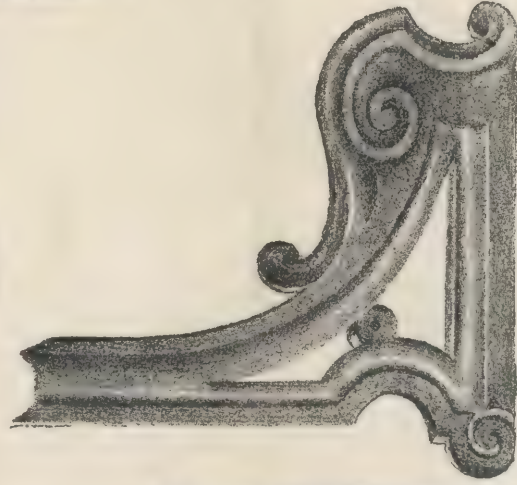


FIG. 6.



FIG. 7.



FIG. 8.



FIG. 3.

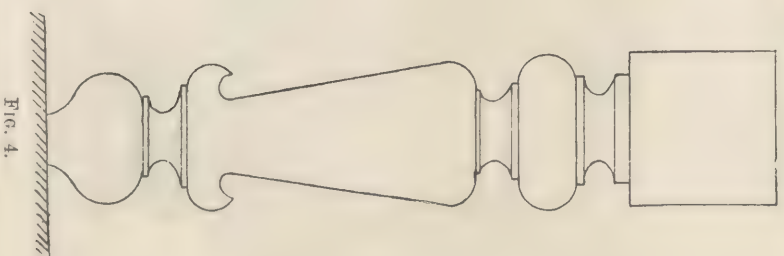
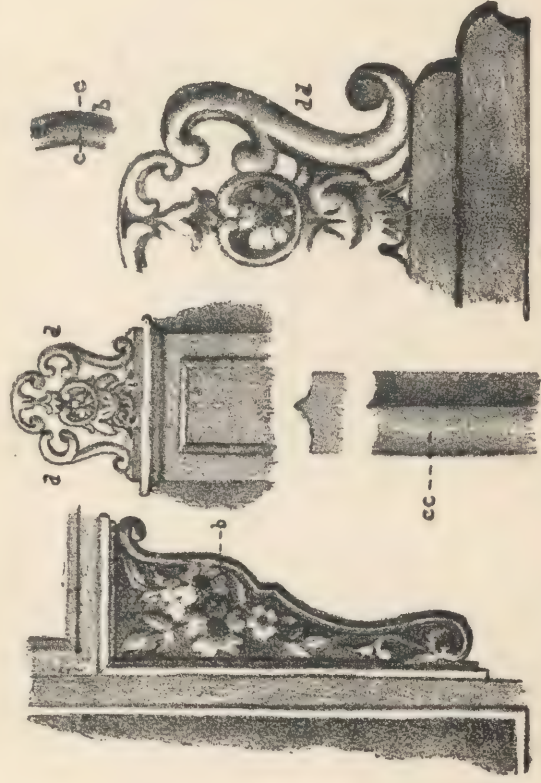


FIG. 4.



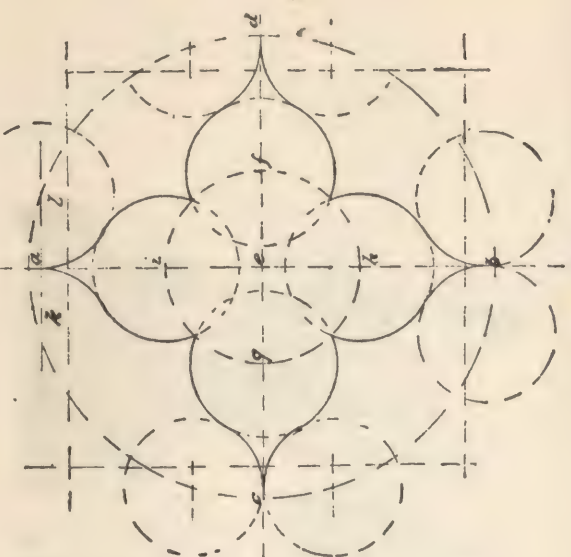


FIG. 1.

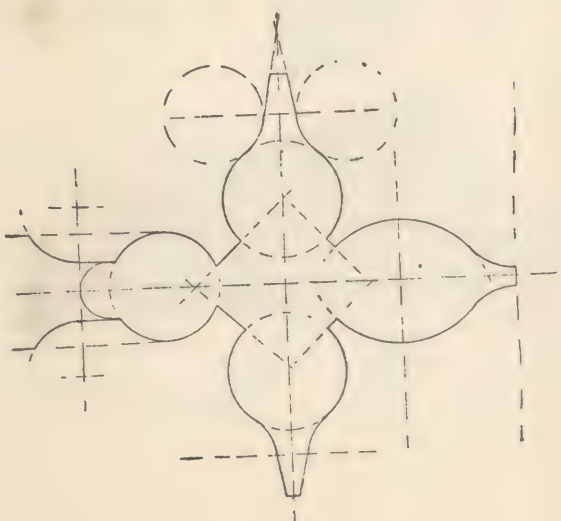


FIG. 2.

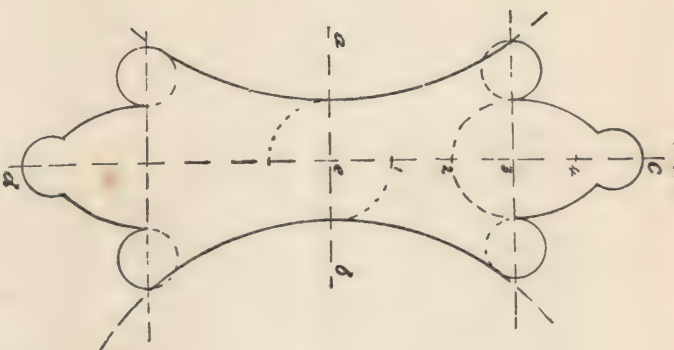


FIG. 3.

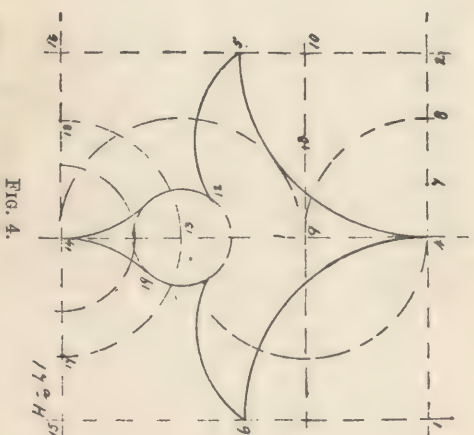


FIG. 4.

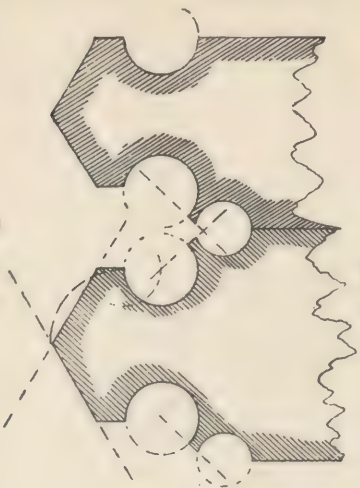


FIG. 5.

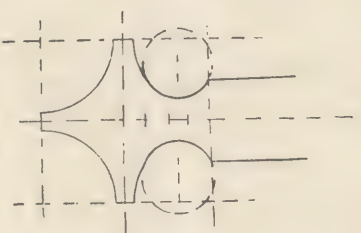


FIG. 6.

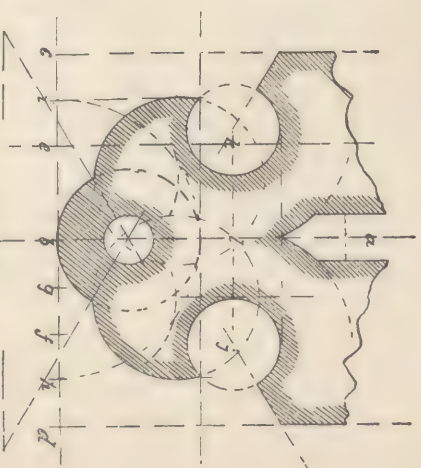


FIG. 7.

THE ORNAMENTAL WORKER IN WOOD.—ELEMENTS OF CUT-WOOD WORK.

ELEMENTS OF CUT-WOOD WORK.

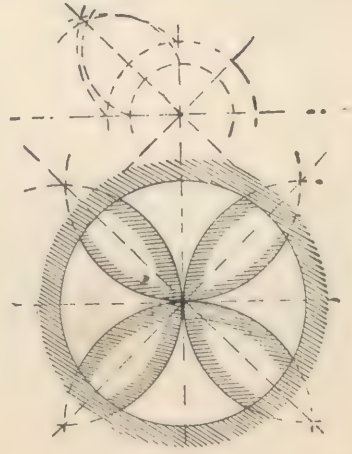


FIG. 1.

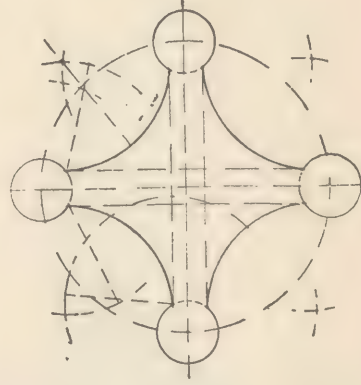


FIG. 2.

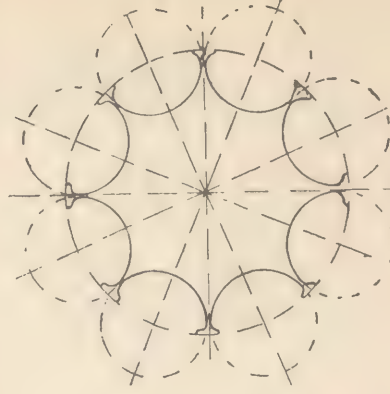


FIG. 3.

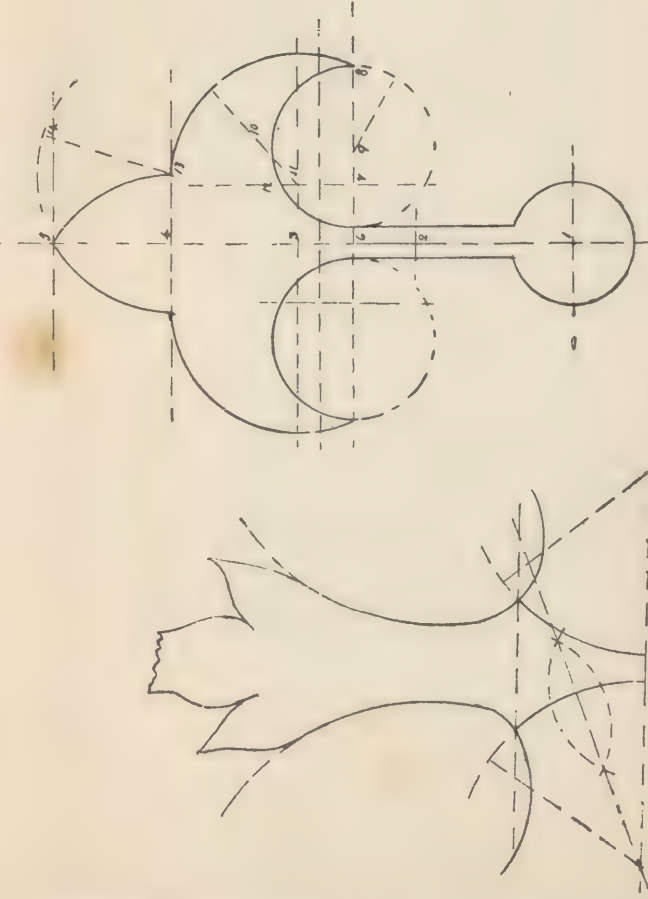


FIG. 4.

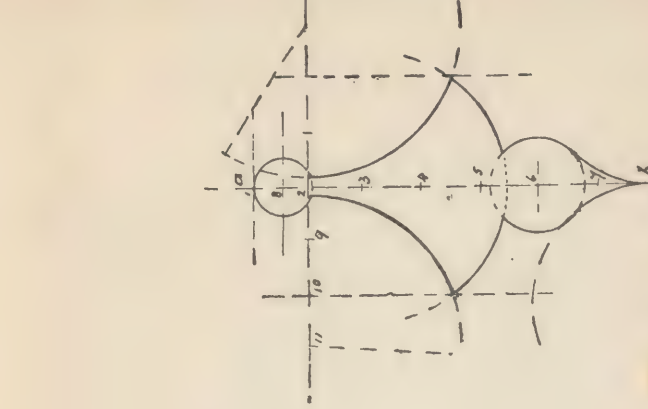


FIG. 5.

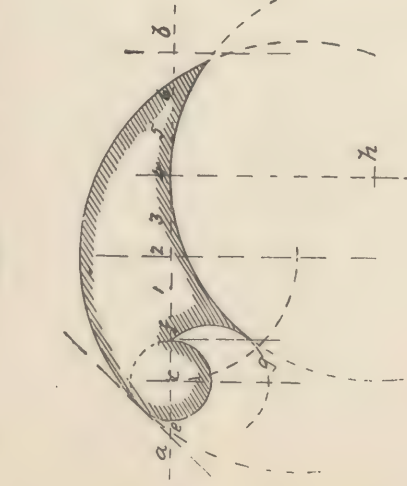


FIG. 6.

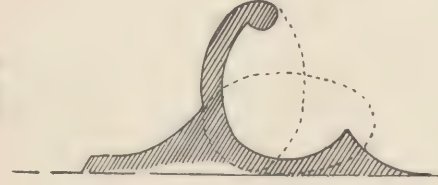


FIG. 7.

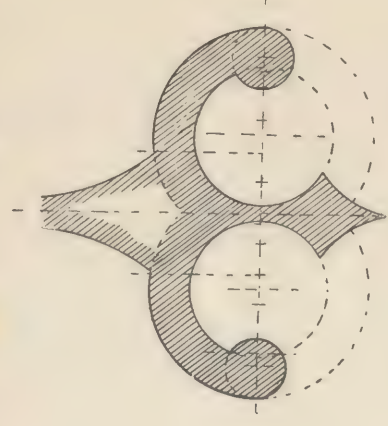


FIG. 8.

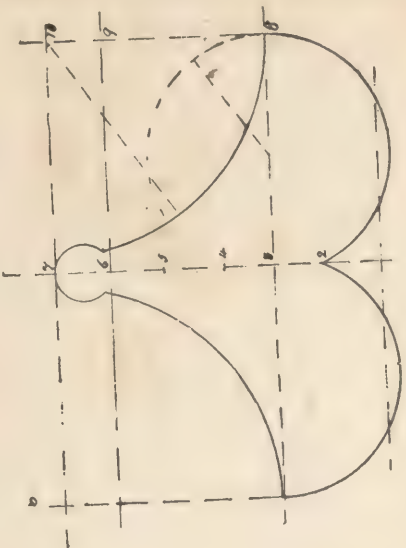


FIG. 1.

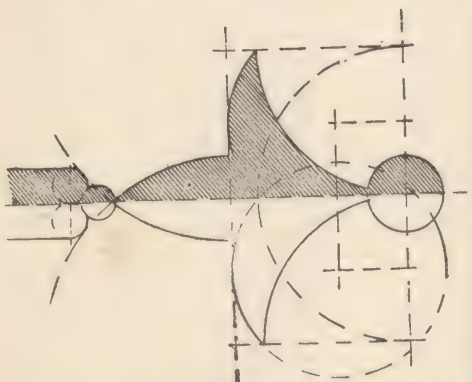


Fig. 2.

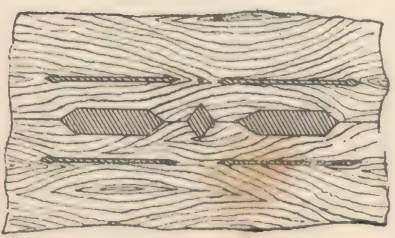


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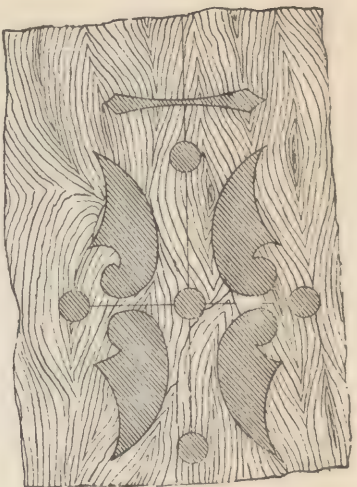


Fig. 4.

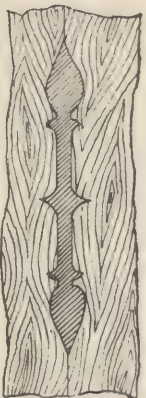


FIG. 6.



FIG. 7.

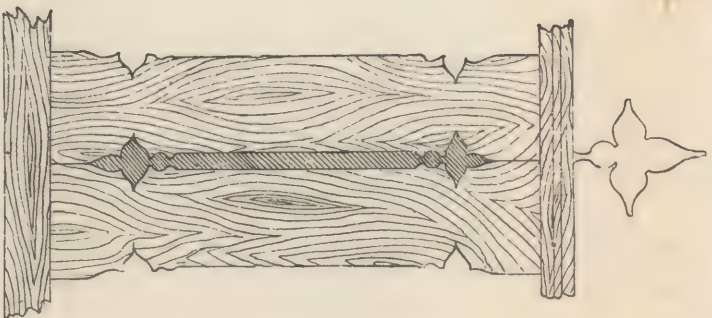


FIG. 5.

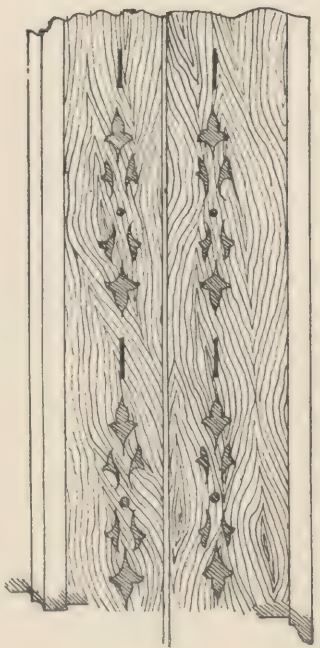


FIG. 8.

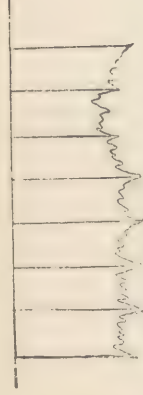
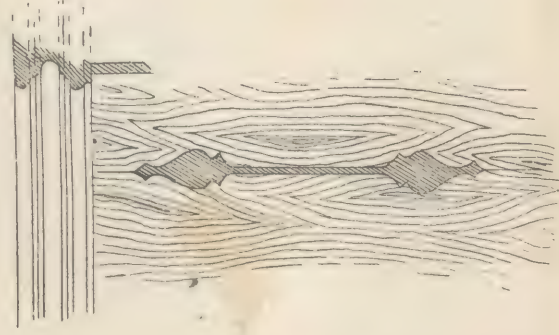


Fig. 1.

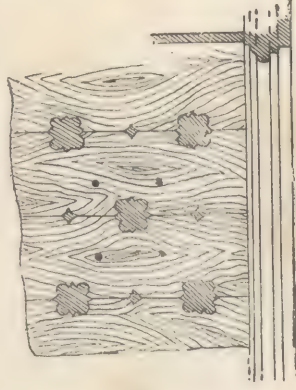


Fig. 3.

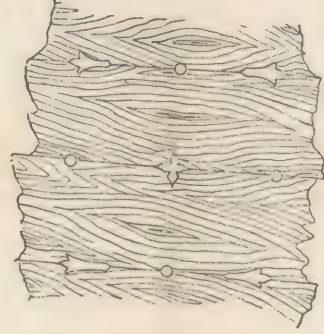


Fig. 4.

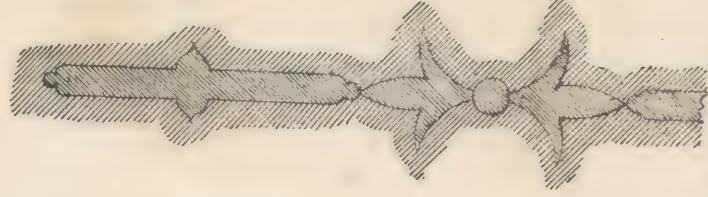


Fig. 5.

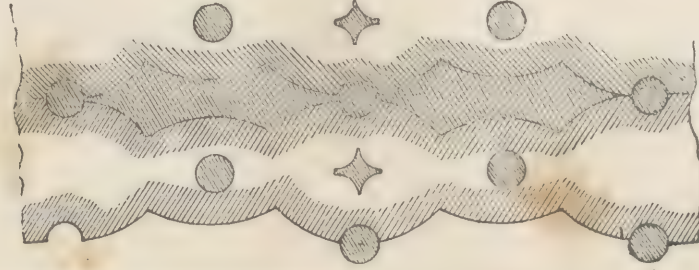


Fig. 6.



Fig. 7.

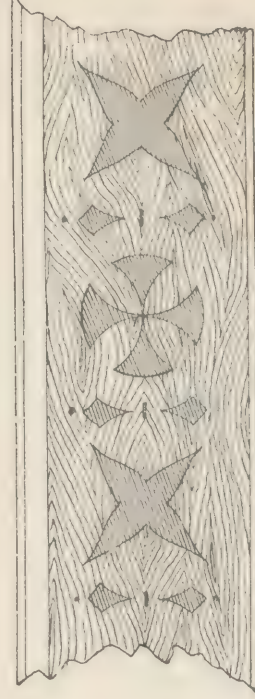


Fig. 8.



Fig. 9.

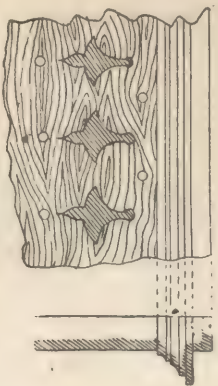


FIG. 1.

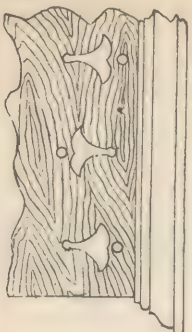


FIG. 3.

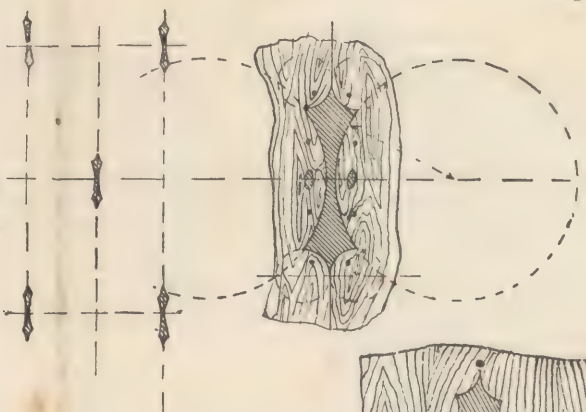


FIG. 6.

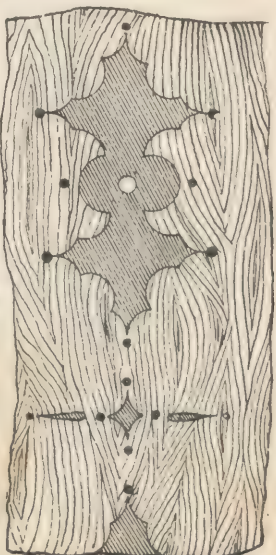


FIG. 2.

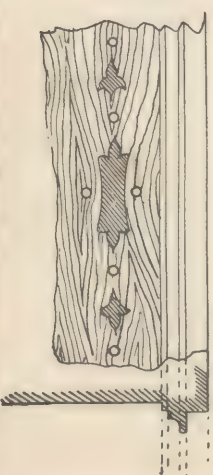


FIG. 4.

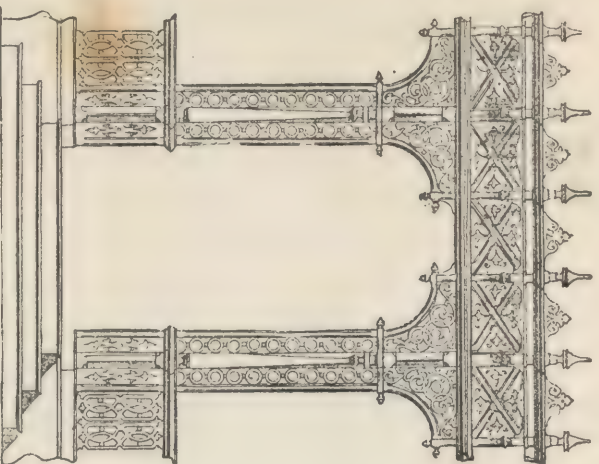


FIG. 5.

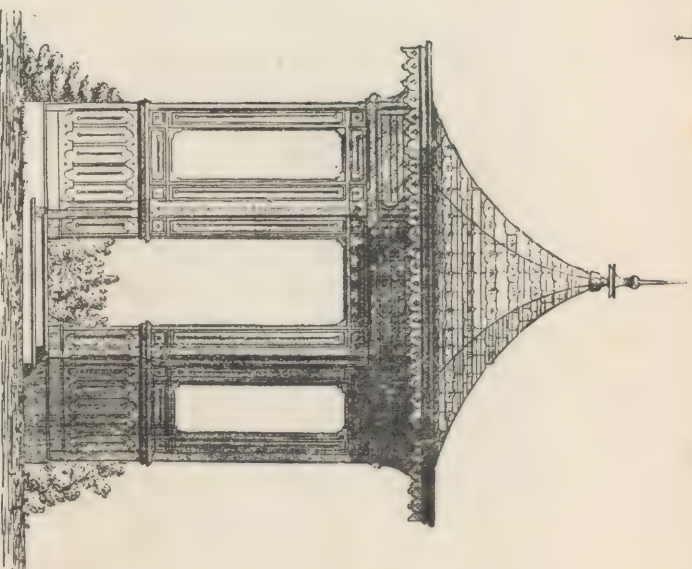


FIG. 7.

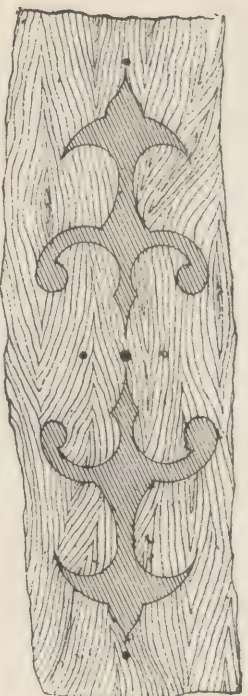


FIG. 8.

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